

CB

HORIZONS

NOVEMBER 1963

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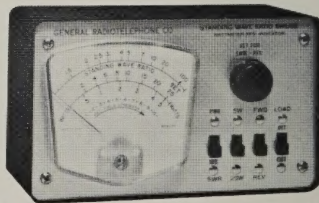
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Highlight Features: 15 WATT CONSTRUCTION.* 3.25 watts minimum output. Sideband receiver adapter for SIDEBAND reception. New Zener diode shunt noise - clamp and series gated limiter circuit for highest noise limiting ever achieved. New ultra-low drift oscillators for unsurpassed stability. New high level tone signal. Illuminated "S" meter. 6V, 12V, 115V operation.

* Under present rules part 19.32 the FCC does not provide for more than 1

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A single precision instrument that measures true power, standing wave ratio, and relative field strength. Calibrates and checks the performance of any 2-way radio from 27 MC to 54 MC.
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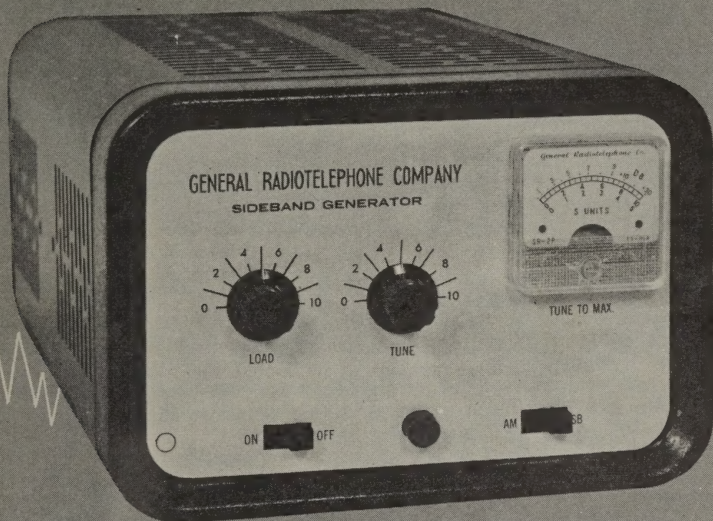
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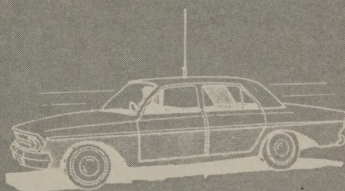
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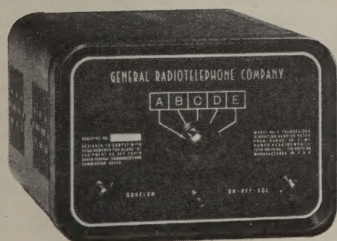


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Simply plug the General SBT-3 Sideband Generator into the MC-5SB or any CB transmitter. The SBT-3 automatically generates double sideband suppressed carrier signal for greater range. True electronic switching—just plug the SBT-3 into your antenna. This unit may also be used on the 10 meter band. GO SIDEBAND WITH GENERAL TODAY!



re) watt input in the Citizens Radio Service (26.965-27.255 MC Band)



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Featuring 15 WATT CONSTRUCTION * and Vibration Rated Service, the VS-2 meets all industrial, CB, and marine requirements. Ideally suited for operation on all types of heavy duty equipment.

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Phone: 849-6891

Area Code: 213

September Winner
of General's Drawing
Mr. Nolan L. Renz
KED0038
Box 128
Cat Spring, Texas



OZZIE'S MAIL- BOX

Ozzie:

Let me thank you for sending me a complimentary sample issue of CBH. The Equipment Directory will be very valuable to me as I suggest to my rancher friends what is available in CB gear. I also greatly appreciated your information on what is going on with the Part 19 proposal. As a new CB'er, I assumed that some type of national organization was already giving this attention. More power to you and the ACBA for what you are doing.

Pastor Earl H. Reed,
KGC0983
Lakeside, Nebraska

Ozzie:

CB Horizons is tops in the field. I get the impression that you are trying to help the third-of-a-million or so Citizens who have invested considerable money in equipment and most of whom will, if permitted to continue, invest considerable time helping their fellow Americans. In the short time I have been on CB I have found that it conciliates true friendship among those who might otherwise remain at a perpetual distance; something that is badly needed in this "I don't know who lives next door" world of today. One question — I have read the part of the new Call-Book which says that it can't be used as a mailing list. Does this include me when I use it to look up the calls and addresses of CB'ers I hear on the air, to mail them a card?

Landis B. Meadows
Normantown, W. Va.

Landis—

Nope. Call-Book mailing list use pertains to using the book for wholesale mailing of advertising, etc., literature to CB'ers. Using the book for locating CB'ers' addresses is what it is intended for.

Ozzie

Dear Ozzie—

I was overjoyed upon receipt of your letter informing me that I was the number one winner in the August Give-Away sponsored by your magazine. My family and I are deeply grateful to you and the makers of the Poly-Comm SR-23 (which I chose as my Dream Transceiver) for making this possible. I feel that the interests of all CB'ers will be best served by subscribing to your very informative magazine and by joining the ACBA. This organization and the efforts of your magazine can do more for Citizens Band Radio than any individual can ever hope to achieve.

Ralph M. Pitts, KCJ2018
Newton, North Carolina

Ralph:

The pleasure of awarding you the Poly-Comm Dream Transceiver was all ours!

Ozzie

Ozzie—

We're taking the bandstand to inform CB'ers of the danger concerning the installation of whips on vehicles. Particular care should be taken in choosing sturdy springs and whips and in choosing the safest place on the vehicle for the whip. It has been brought to our attention that many motorists have complained of broken side-mirrors, chipped paint, etc. as a direct result of a passing CB'er's whip. Some installations are put on the outside of fenders; this is, in our opinion, a major cause of damage, especially with 102 inch steel whips! Just a fraction of a turn on the steering wheel can result in four feet of sway from the whip. We hope all CB'ers will take a little extra precaution before installing their whips, thus eliminating this all-too-common complaint about our activities!

Judy Clark, Secretary
Ottawa 5 Watters
Ottawa, Illinois

Dear Ozzie—

I always read your Mail Box first and it's always interesting. But that's more than I can say for your latest attempt to be funny! That diatribe on how to treat FCC inspectors was the worst waste of space ever. PLEASE stick to something educational or amusing.

James S. Green
McMinnville, Oregon

Jim:

The "How to Deal . . ." article came in the mail one day, anonymously. Half the staff laughed themselves silly, the other half thought it was less than funny. The half that laughed so hard snuck it into print. Since then the not-so-humorous half has dug up a copy of Broadcast Engineering magazine, dated for May 1963, in which we find an article entitled "12 Rules For Dealing With FCC Inspectors." Obviously our anonymous contributor saw this first and re-wrote the idea for CB'ers. Now that we think about it, it probably isn't so funny after all. I was a part of the non-humorous half.

Ozzie

Dear Ozzie:

I have just finished reading the article in the August issue titled "Three Hours With New FCC Chairman E. William Henry." I must say that the writer did an outstanding job. Congratulations are in order! This article has brought to light many good ideas and your proposals to Chairman E. William Henry I feel would solve many present day CB problems. I especially like the one concerning channel allocation, and I would like to see your staff present the proposal in a formal manner as soon as would be possible. If you could draft up such a proposal and circulate it to the CB clubs, I am sure it would gain overwhelming nationwide support. Our gang, I am certain, would sign.

C. Cliff Morris, KEJ3300
So. California CB Assoc.
San Diego, California

Cliff:

Perhaps such a formal petition for rule making to the Commission would start the ball rolling our way. I wonder how many other club groups would like to see such a petition circulated, based upon the proposals brought forth in the August issue of CB Horizons?

Ozzie

COURIER 1-M

NOW!

QUIETEST

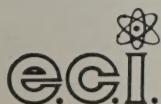
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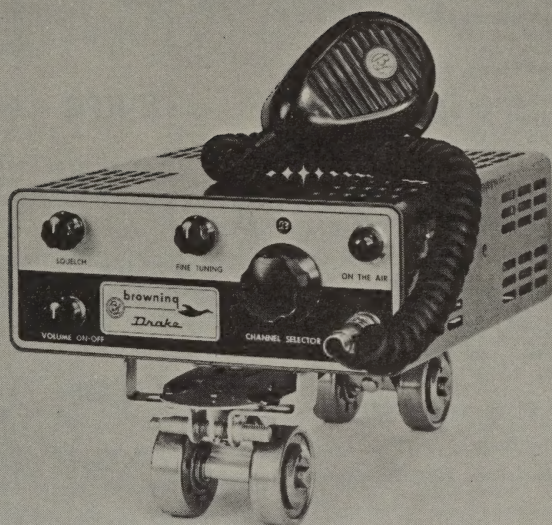
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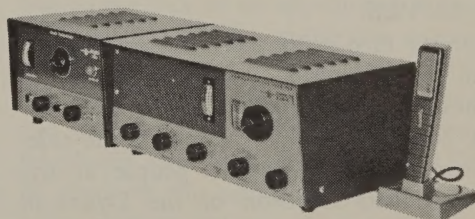


The best mobile CB rig on wheels.

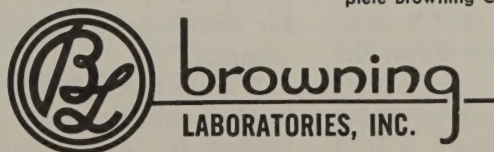
Planning to buy a Citizens Band mobile transceiver? Don't make a move until you've seen the Browning Drake M-523. It's the smallest 23-channel mobile rig you can buy, only 8" x 9" x 3". The Browning Drake will fit perfectly under the dash of your car, no matter what make, and still leave plenty of knee room. Or you may choose the M-506, the six channel version of the Drake. Either way, you get the communication reliability and range you want because the Drake has the same tubes, components and circuitry

that made the Browning base station nationally famous. You can see the Drake and other Browning CB equipment at over 125 franchised service centers across the nation...

Write us for the name of the one nearest you.



For home, office or business use, see the complete Browning CB base station equipment.



Dept. H , 100 Union Ave., Laconia, New Hampshire 03246

CITIZENS COMMUNICATION MANAGERS

CCM's are volunteer reporters appointed by CB Horizons to report operating news and coming events of their locales. CB'ers interested in participating in this program are urged to contact our CCM Project Coordinator, Jamie Jones.

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OUR COVER

A pretty miss with a brand new innovation to the CB world — the first honest-to-goodness single sideband CB transceiver.

The SSB-27 is a five channel single sideband transceiver from the people at the Mark Products Division of the Dynascan Corporation, 1801 W. Belle Plaine Avenue, Chicago 13, Illinois. This unit is probably the most sophisticated piece of CB communications equipment to come down the pike.

The crystals are mounted in an oven, where their operating temperature is held constant.

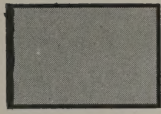
A vernier adjustment on the receiver

(called voice-lock) allows the user to fine-tune the received signal for maximum intelligence and the best duplicate of normal AM reception.

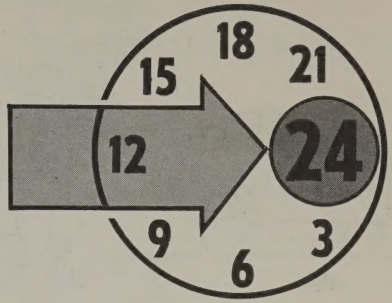
Using the highly selective crystal filter in the receiver, Mark Products has made possible 23 upper sideband channels and 23 lower sideband channels, thus giving up up to 46 completely separate channels for communications in the existing 23 AM channels.

We are sure you will find the new sideband equipment as exciting as we are finding it. A full engineering report is hopefully planned for next month, on the SSB-27 units.

EDITORIAL



CHANNEL



A MESSAGE FROM THE STAFF

CB Horizons is losing its Publisher-Editor. On September 20th of this year, Robert B. Cooper, Jr., president of Horizons Publications, Inc., resigned and left the company to join the ranks of the ACBA as Executive Director.

To all of us here at the firm's offices, this came as a surprise. But, to better explain the 'wherefores,' let us pass Bob's statement on to you. "Everyone has, from time to time, a strong feeling or conviction about an idea or a principle. Usually the motivating force is a lack of, or too much, of something we do or do not like. To the point, I believe strongly in the concept of the ACBA."

"This past few weeks have been busy ones for me. Busy because when it all started I did not realize how demanding the requirements of the ACBA would be. Nor, did I foresee the rapid growth of the organization."

Nevertheless, the ACBA has grown and has taken more and more from my already taxed spare hours. Up until a short time ago, I felt it would not be too difficult a task to keep up with the constant flow of mail plus other necessary jobs. I have since found that I cannot keep up with the ACBA and my regular duties."

"I therefore believe it would be best if I made a decision immediately as to my future course of action. In considering the direction I must take, I am cognizant of the outstanding abilities of those on the staff of Horizons Publication."

Bob went on to say, "I know everyone will understand my intense desire to keep the ACBA going on a strong footing. Call it one of those things that confronts every man, once in his lifetime."

I guess that all we, the staff of Horizons Publications, can say is, Bob we'll miss you.

Speaking of the ACBA, we understand from Bob that the association is now incorporated. In fact, we discussed several things of interest with Bob and have decided to pass these things on to you each month via an ACBA column (the new column will start in next month's issue). We feel sure this column will be of interest to our readers (many do belong to the ACBA). However, we are not going to treat the ACBA elsewhere, specifically because Bob did not want us to. He said he felt that too much had probably been said about the group and that he wanted to see it handled in the manner that a free press would. We all admire him for this decision.

MONITORING TRANSMISSIONS

Although much has been said about the legalities of listening to the transmissions of others (without their knowledge), there has been too little put in print to inform the CB'ers of his or her rights. One of the reasons that little has been printed has been due to the lack of an appropriate interpretation of the laws governing the interception of radio messages. This is no longer true.

Some very recent court cases involving the monitoring of radio transmissions and telephone calls have caused a little light to be shed on the subject. The results of the court cases mean very little to those of us without legal backgrounds but they apparently meant something to a well-known legal firm, who shall remain nameless. This legal firm drew up a complete analysis of the situation and a simple guide-line which defined the conclusions reached.

We would like to pass this information on to you.

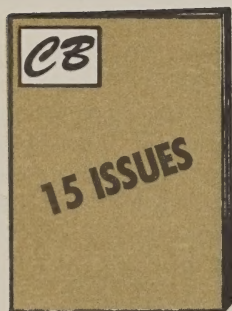
CONTINUED — page 21



CB HORIZONS IS A GOLD MINE OF CB INFORMATION!

Each and every month **CB Horizons** brings to the Class D Citizens Radio Service users the largest and most complete report on CRS activities from the far west (Guam and 21W stations) to the far east (Our CB friends in Germany and Great Britain who are discovering CBH in droves these days!). Complete CB news from Washington; Complete CB Technical Topics; Complete CB Product News; Complete CB news from the ACBA, local, state and regional clubs; and the biggest most highly quoted selection of editorial material in print anywhere! No active CB'er can afford to be without **CB Horizons** when it costs **only \$4.00 per year** using the special Bonanza Offer order card to the right.

SPECIAL BONUS OFFER EXPIRES NOVEMBER 10TH
MAIL IN YOUR ORDER TODAY!



PLUS



=

\$4.00

Up to 15 months of CB Horizons and a free CBL card plastic packet (holds 20 cards!) for wall mounting, for \$1.00 less than the normal 12 month subscription alone!



**And You
Can Strike It
Rich
Every Month**

**WITH CB HORIZONS AND THE
BRAND NEW (exclusive) CBH PRIZE FEATURE ...
Prize Feature - CB BONANZA!**

ORDER YOUR \$4.00 BONUS PACKAGE HERE!

. . . YES — Enclosed my check/money order for \$4.00 for the special Bonus Package of CB Horizons and a FREE CBL Card packet.

Name_____ CB Call_____

Address_____

Town/City_____ Zone_____ State_____

OFFER EXPIRES MIDNIGHT NOVEMBER 10th !

AIRMAIL ORDER TO:
CB HORIZONS BONUS
P.O. Box 1557, Oklahoma City 1, Oklahoma

ORDER YOUR \$7.00 BONUS PACKAGE HERE!

. . . YES — Enclosed my check/money order for \$7.00 for the special Bonus Package of CB Horizon, the FREE CBL Card Packet and a copy of the brand new SUMMER CB CALL-BOOK.

Name_____ CB Call_____

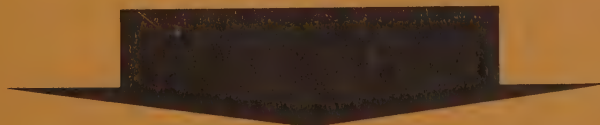
Address_____

Town/City_____ Zone_____ State_____

OFFER EXPIRES MIDNIGHT NOVEMBER 10th !

AIRMAIL ORDER TO:
CB HORIZONS BIG BONUS
P.O. Box 1557, Oklahoma City 1, Oklahoma

THIS IS YOUR CB BONANZA NUMBER



Nº 4781

SEE PAGE 13 FOR FULL DETAILS

THE CB RADIO HANDBOOK

Do You Have Your Copy Ordered?

This is the **most** ever, for the lowest price ever! A COMPLETE Handbook to CB radio operation, including mobile, base, portable; installation, maintenance and repair. Setting up a CB club. Running a CB club. Everything the CB'er needs for constant and ready reference. Approximately 160 pages, 6 1/8 by 9 1/4 inches, with a durable knock-about cover. Your copy will be mailed to you postpaid when you send us the card below, with your check or money order for \$1.95.

PRICE — \$1.95 at your CB Dealers, or use the handy order card below.

CB RADIO
HANDBOOK

**BRAND
NEW!**

CB RADIO
HANDBOOK

SEND ME the BRAND NEW 1964 CB RADIO HANDBOOK from Horizons. I enclose my check/money order for \$1.95.

(Book will be shipped late in November.)

SHIP TO _____ CB Call _____

Address _____

City _____ Zone _____ State _____

ELS MEMBERS NOTE: You receive this edition with your ELS Membership

MAIL ORDER TO:
1964 CB Handbook
P. O. Box 1557
Oklahoma City 1, Oklahoma

YOUR CB BONANZA PERSONAL NUMBER CARD

The reverse side of this card contains your personal CB Bonanza number. Check this number at the CB Bonanza display of your local CB dealer. If you have a winning number, have your dealer validate this card and return it to CB Horizons, address below.

My name _____ CB Call _____

Address _____

City _____ Zone _____ State _____

My magazine is a subscription copy _____ store copy _____ sample copy _____ stolen from a friend _____

I hereby certify that the above named CB Horizon reader has entered my store and found that his CB Bonanza number was a winner. I am a Bonanza dealer. Don't forget to send my merchandise prizes too!

Dealer's name _____

Dealer's address _____

Card must be mailed prior to November 15, 1963

Mail to: CB Bonanza, CB Horizons
P. O. Box 1557, Okla. City 1, Okla.

CB BONANZA WINNING NUMBERS

for November

ON DISPLAY NOW AT YOUR LOCAL CB DEALER !

**Check Your CB Dealer's
Bonanza Display NOW
for your Bonanza
Winning Number
shown on insert-page
11 in this issue of CBH**

CB Bonanza Rules

- (1) The gold colored card, facing page 10 of this issue, contains your personal Bonanza number.
- (2) Every number is different, each magazine has an individual number.
- (3) Hundreds of CB Dealers around the country have special displays which show this month's winning numbers.
- (4) Take your magazine and/or card into your nearest CB dealer and check to see if your card number is a winner.
- (5) If you have a winning card, have your dealer validate the card and then mail the card to CB Bonanza, CB Horizons, P.O. Box 1557, Oklahoma City 1, Oklahoma.
- (6) Your prize (a FREE CB transceiver or a CB accessory, as indicated by which number you have) will be shipped to you from CBH or the participating manufacturer.
- (7) Your dealer wins valuable merchandise prizes too! Cards not validated by a dealer are not valid winners.
- (8) If your local CB dealer does not have a Bonanza display, show him the announcement on page 47 of this issue of CBH and make sure he has the Bonanza display next month. How else can you win those prizes!

**AND — CHECK OVER THESE NEW CB PRODUCTS
ALSO ON DISPLAY THIS MONTH ACROSS THE COUNTRY!!**

CLR MARK TWO — New improved version of the CLR gain-vertical antenna with ruggedized construction, built-in static arrestor and 3.4 db gain.

PEARCE-SIMPSON ESCORT — Deluxe transceiver featuring 8 crystal controlled channels on transmit and receive plus a 23 channel tuneable receiver S meter, crystal spotting switch, output indicator, transistorized power supply.

POLYTRONICS N-8 — 8 channel crystal controlled ruggedized transceiver with sensitive nuvistORIZED receiver, switchable noise limiter, special receiver design for maximum elimination of adjacent channel interference.

**IF YOUR CB DEALER DOES NOT HAVE A BONANZA DISPLAY
SHOW HIM THE BONANZA DEALER ANNOUNCEMENT ON
PAGE 47**

5-DAY FCC CB CRACKDOWN

material submitted by
Ben F. Waple
Secretary
Federal Communications Commission

1,275 licensees don't need to be told. Over the period June 3 through June 7, the Federal Communications Commission through its Field Engineering Bureau conducted a nationwide survey of conditions in the Class D citizens Radio Service.

The exact reason for the survey, or the person who instigated it, is unknown at this time. The results of the survey are known, and through the cooperation of FCC Secretary Ben F. Waple, CB Horizons' Washington staff brings you the tabulated results of the study.

The study was the first known period during which the FCC went "all-out" to cite and record violations in the CRS on a nationwide basis. All FCC Field Offices, sub-offices and monitoring stations participated. The period began June 3 and ran through mid-night June 7.

During the survey, a total of 7,298 rule violations (infractions) were observed by Commission personnel, and 1,275 Official Notices of Violation, Form 794, were issued to licensees in the Citizens Band Service.

The period covered, during the first week in June, included a period when summer-time skip conditions were very much in evidence. The skip-talkers and "Come-Back-Virginia" boys were at it hot and heavy, and the break-down of rule infractions reflects this.

Table One, shown here illustrates the actual rule violations observed by the Commission, and the applicable sections.

The heaviest concentration of violations was observed in 19.61 and its sub sections. 19.61 (a) was the hands down winner with 2,678 violations recorded. 19.61 (g) was a close contender with 976 violations.

19.62 was in there competing for top honors with 1,605 violations observed.

Other high scores included 19.33 (944 violations reported), 19.61 (f) (508 violations reported), and 19.83 (102 violations).

Now, let's look at what type of rule infractions we are talking about.

We'll deal just with the larger scorers.
19.33 — 944 Violations

Frequency tolerance violations. Of the nearly 7,300 rule infractions noted, over 12 percent were for stations operating more than .005% off of the center frequency of the channels involved. Sounds like someone better start a frequency check program and soon!

19.61 (a) — 2,678 Violations

Permissible communications. The largest single violation area involved this region of defining allowable communications. Apparently stations communicating over subjects the Commission monitors did not consider 'substantive' were hooked here.

19.61 (f) — 508 Violations

Five minutes on, two minutes off. 8 percent of the violations noted were too long-talkers.

19.61 (g) — 976 Violations

Skip talkers. The Commission cited nearly 13 percent of the violators for communicating via skip transmissions.

19.62 — 1,605 Violations

Improper station identification. A large number of those monitored apparently did not sign their call sign at the beginning and end of each transmission (where required), or engaged in overlong communications with their own units without proper identification.

19.83 — 102 Violations

False signals. This does not necessarily indicate phoney messages, as it can mean stations who identified with abbreviated call sign (ie., "4764 this is 2338"), or self-named identifiers ("Big Boy this is Black Bear").

One of the more interesting lesser violations crops up under 19.34 (d). This section pertains to permissible types of modulation. 30 stations were noted using either FM modulation, or (more likely) Q-Bird or Turkey Call units, in violation of the current interpretation of section 19.34 (d).

19.61 (e) snagged 193 violators. This section pertains to keeping your transmissions to the minimum practical transmission time, for the message that has to sent. In other words, the Commission, under 19.61 (e) has the power to decide when you have talked too long for a given message (the power of censorship) and they can cite you (they believe) for violating this section!

In as much as the Commission does not announce their 'Field Day Events' in advance, there is no opportunity for CB Horizons to advise CB'ers to be on their good behavior in advance of these events.

Our advice is simply this. Re-evaluate your own operating techniques in light of the proportionate number of violations noted by the Commission during this past enforcement period, and make a conscientious effort on your own to see that you do not fall into the clutches of a citation notice from the Commission.

FCC Form 793
June 1961

UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION

Room 401, 708 JACKSON
DALLAS, TEXAS

OFFICIAL NOTICE OF VIOLATION

The facts set forth below indicate that you have violated the requirements of law and treaty. This Notice is issued in accordance with Section 1.76 of the Commission's Rules.

Within 10 DAYS from receipt of this Notice, a written answer in DUPLICATE shall be addressed to "Federal Communications Commission" and SENT TO THE ADDRESS ABOVE. DO NOT address your reply to an individual.

MAKE CERTAIN THAT YOUR ANSWER:

(a) IS COMPLETE IN ITSELF
(b) IS NOT ABREVIATED BY REFERENCE TO OTHER NOTICES
(c) CONTAINS FULL EXPLANATION OF VIOLATION INVOLVED
(d) EXPLAINS ACTION TAKEN TO PREVENT CONTINUATION OR REOCCURRENCE

1. NAME AND ADDRESS OF LICENSEE
OKLAHOMA CITY, OKLAHOMA

2. LOCATION OF STATION
OKLAHOMA CITY, OKLA.

3. CALL SIGN
OKLAHOMA CITY, OKLA.

4. CLASS OF STATION
CITIZEN SERVICE

5. DATE OF VIOLATION
11-28-1962

6. HOUR OF VIOLATION
3:12 PM CST

7. ASSIGNED BAND
MEASURED

8. FREQUENCY
HIGH/LOW CYCLES

10. VIOLATION: NONCOMPLIANCE WITH FCC RULES AND REGULATIONS

1. SECTION 19.61(a) AND (c) IN THAT THE SUBSTANCE OF YOUR TRANSMISSIONS WAS SUCH THAT CITIZEN RADIO SERVICE IN AND OF ITSELF WAS BEING USED AS A HOBBY. THE PURPOSE OF CITIZEN RADIO SERVICE IS TO PROVIDE A CITIZEN WITH A MEANS TO COMMUNICATE BY RADIO WHEN NECESSARY TO EXCHANGE SUBSTANTIVE MESSAGES IN THE CONDUCT OF HIS PERSONAL AFFAIRS OR BUSINESS ACTIVITIES. CHIT-CHAT AND OTHER IDLE CONVERSATION, OR HOBBY-TYPE DISCUSSION OF CITIZEN RADIO EQUIPMENT AND OPERATIONS CANNOT BE CONSIDERED NECESSARY OR SUBSTANTIVE TO PERSONAL AFFAIRS OR BUSINESS ACTIVITIES OF ALL THE LICENSEES INVOLVED.

2. SECTION 19.62 IN THAT THE COMPLETE STATION CALL SIGN WAS NOT TRANSMITTED AT THE BEGINNING AND END OF COMMUNICATIONS.

Joseph W. Burdette
ISSUING OFFICER

1962-06-28
DATE MAILED

1962-06-28
DATE RECEIVED

FCC FORM 793, a citation for alleged violation of CRS rules.

RULE INFRACTIONS BY LICENSEES IN THE CLASS D SERVICE. DURING THE PERIOD JUNE 3 TO JUNE 7, 1963

Rule	Number of Violations
19.1	10
19.17	1
19.24 (a)	10
19.25	4
19.25 (c)	54
19.32	1
19.33	944
19.34 (d)	30
19.36 (a)	13
19.61 (a)	2678
19.61 (b)	14
19.61 (c)	58
19.61 (e)	193
19.61 (f)	508
19.61 (g)	976
19.61 (h)	42
19.61 (i)	1
19.61 (j)	12
19.62	1605
19.62 (a)	1
19.64	1
19.71 (d)	1
19.71 (d)	1
19.72	1
19.72 (a)	11
19.72 (b)	7
19.73	1
19.71 (b)	1
19.83	102
19.92	3
19.93	1

ADD PUBLIC ADDRESS FUNCTION TO YOUR CB TRANSCEIVER

How many times have you wished to step out of your car for a short chat, but feared you should not because you might miss an important CB call?

How many times have you wanted to fish or just day dream outside the car, by the side of the road, but feared not for want of the CB calls you were expecting?

In short, how many times have you not left your vehicle because you couldn't take our CB unit with you?

There is an answer to this problem: **the paging speaker.**

An external paging speaker, similar to those speakers used on playgrounds, at drive-in theatres and drive-in restaurants, is simple to add to your CB set, weatherproof and watertight, and, it provides you with the option of turning your own CB transceiver into a P.A. (public address) system of moderate power for calling the family, hailing a friend at the lake or helping out with parades and other CB oriented functions.

In other words, you do need a paging speaker with your CB system. And here's how to get one.

MODIFYING YOUR CB TRANSCEIVER

The amount of modifications required, to put you into the paging and external speaker swing of things will depend upon the unit (transceiver) you are using.

Basically, all we are doing is adding an additional speaker in parallel with your existing speaker (the new speaker being the pager), and for P.A. system use, installing a switch so that rather than transmit when we push the microphone button, we turn our transceiver into an audio amplifier and the power (audio) goes to the external paging speaker, not to the transmitter.

In this regard we want to retain all of the original functions of our transceiver, including the push-to-talk function of the mike, so the push-to-talk becomes push-to-P.A.

ITEMS TO CONSIDER

Now before any thought is given to the actual installation of the external speaker, let's consider what **type** of external talker we are considering. Most cars just don't lend themselves to attaching an external



bull horn speaker, at least not permanently. Few wives would welcome the addition either. The hazards any permanently mounted external speaker is liable to encounter must include wind, rain, snow, sleet, sharp blows and much hot sunshine. It is going to take a pretty healthy speaker to take this kind of punishment and still come out performing. For our own use, in developing this project at the Horizons Lab, we evaluated many of the commercial paging speakers on the market.

Electro-Voice's PA-7 unit and University's MIL-A unit were chosen for actual working installation in the transceivers we worked with.

Both are light-weight, recent in design, made of tough weather and waterproof

materials and built to take the kind of punishment you are likely to give it.

MOUNTING THE SPEAKER

Where do you mount an external P.A. speaker?

There are numerous answers to this one. Let's assume you won't want to keep the speaker permanently mounted. OK — so you can mount the manufacturer's supplied mounting bracket on the front or rear fender of your vehicle. This mounts much like a body-antenna mount, and you can drop the twisted pair wires feeding the speaker down inside the fender and run them through the firewall or under the seats to the transceiver.

Or, you can investigate a magnet-catch, a small lightweight magnet base that sits on

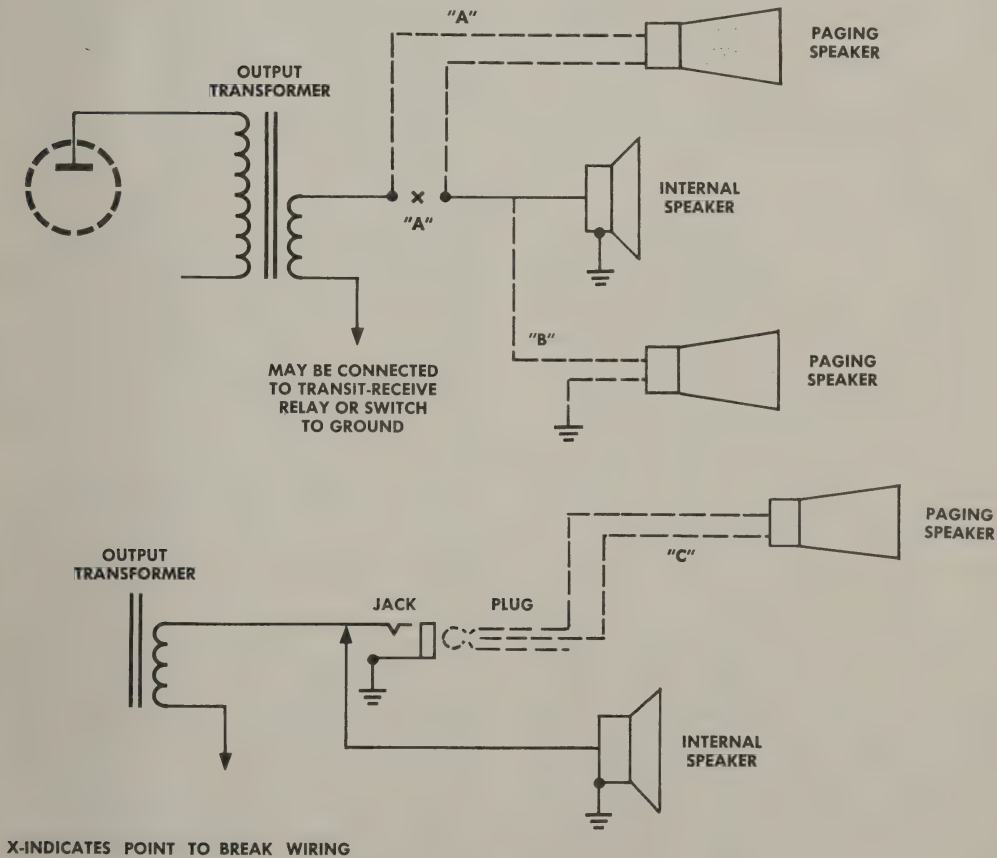
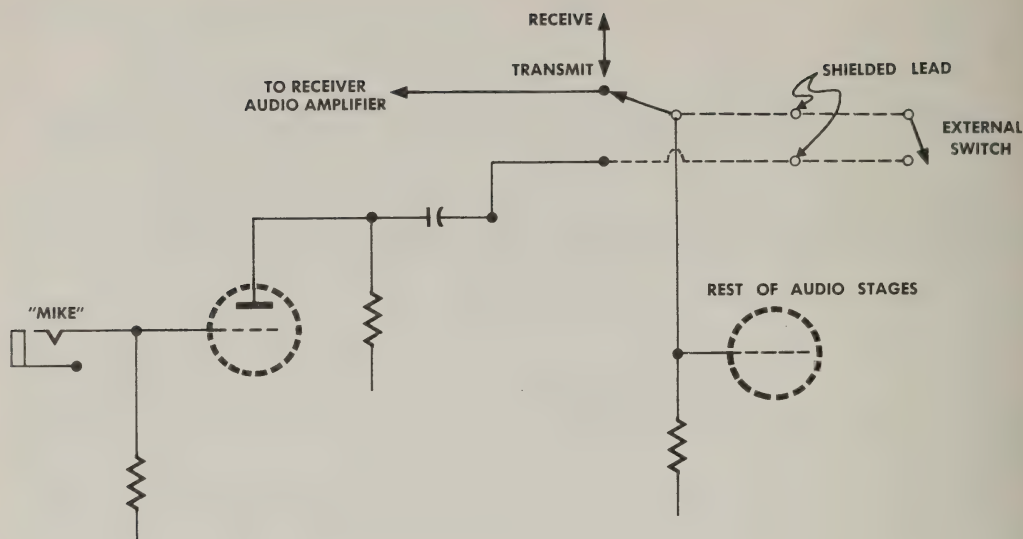


FIGURE 1



a metal surface on one side and holds to itself a second metal object (the speaker mount) on the other side. With one of these gadgets, you simply latch on to the top of the car top whenever paging is needed and run the twisted pair into the car through the window.

With a magnet mount, you can also think about mounting the speaker on the back shelf of the car behind the rear seat. This will give you greatly increased audibility in the mobile, and for close-in operation while parked, you simply roll the auto windows down and crank up the audio gain.

CONVERTING YOUR CB RADIO

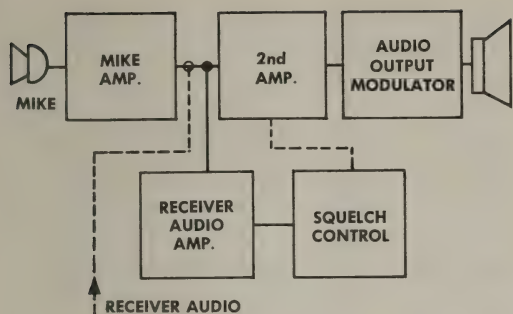
Adding an external paging speaker is a relatively easy task. First you will have to locate the output transformer and the leads to your internal speaker. Once you have found these, you can add your external speaker to the unit in one of three different ways. Figure 1 shows the three basic methods; "A" series connects the speakers allowing the internal speaker to operate also; "B" parallel connects speakers with the internal speaker still in use; and "C" uses an added jack or in the case of some CB units an already existing jack. The method shown in "C" will disconnect the internal speaker when the plug is inserted.

The remaining part of the conversion is concerned with the internal workings of

your particular transceiver and will vary with the type of unit. We will try to give you many of the necessary details so you will be able to convert your own set.

Check the schematic for your particular radio to locate the transmitter **keying** circuit. This will either be a relay or a natural switch. If it is a manual switch, see if it connects and disconnects any of the transmitter audio circuits. If it does, an external switch will have to be added to complete this circuit without having to throw the transmit-receive switch (this would put the unit on-the-air). Figure 2 shows a common CB set with manual transmit-receive switch and the necessary modification.

If you have a CB unit with **relay** keying, as most sets are, the modification will be a little more extensive and extremely difficult on some sets, such as the Johnson Messenger Two. Actually, deciding which sets can be easily converted and those that can't is going to depend upon whether or not any of the audio amplifier stages **between** the microphone and the audio output transformer are "controlled" by the squelch circuit. Referring to Figure 3, this is a typical three stage audio amplifier used in some CB sets. Note that the audio from the receiver's detector is being fed through a separate amplifier stage and then to the 2nd audio amplifier stage. This type of circuit



is one that will allow the P.A. conversion. However, if the squelch control stage was connected directly to these example stages as is shown by the dotted lines, then the conversion should not be made. The reason this type of circuit cannot be readily used is because the squelch control stage usually must have AVC voltage to 'open-up' the audio amplifier it controls. Normally this AVC voltage is derived from the RF generated by the transmitter stages. In P.A. service, though, we don't use the transmitter section so there is no reasonable way to

develop AVC voltage to 'open-up' the necessary audio amplifier.

As an example, one set that can be rapidly converted is the Knight C-22 transceiver. As shown in Figure 4, with the C-22, it is only necessary to add a single switch and "Presto" you have a ready made P.A. system. If this switch is a simple dual-section push-button, then you have only to hold it in when you talk (and don't push the mike button). When you release it, the unit is back to normal, receiving signals as before.

The C-22 is, however, one of the simplest sets to convert and requires only that B plus be applied to the internal mike pre-amp stage and the internal speaker disconnected to prevent feed-back that might be caused by the close proximity of the mike. For all this simplicity there is a drawback. There is no way to control the volume of the unit (when operated as a p.a. system, the volume control on the set has no effect). Should you find that it is necessary to add some kind of volume control, change the fixed resistor, R-33, for a potentiometer of the same value (shown on Figure 4). Remember

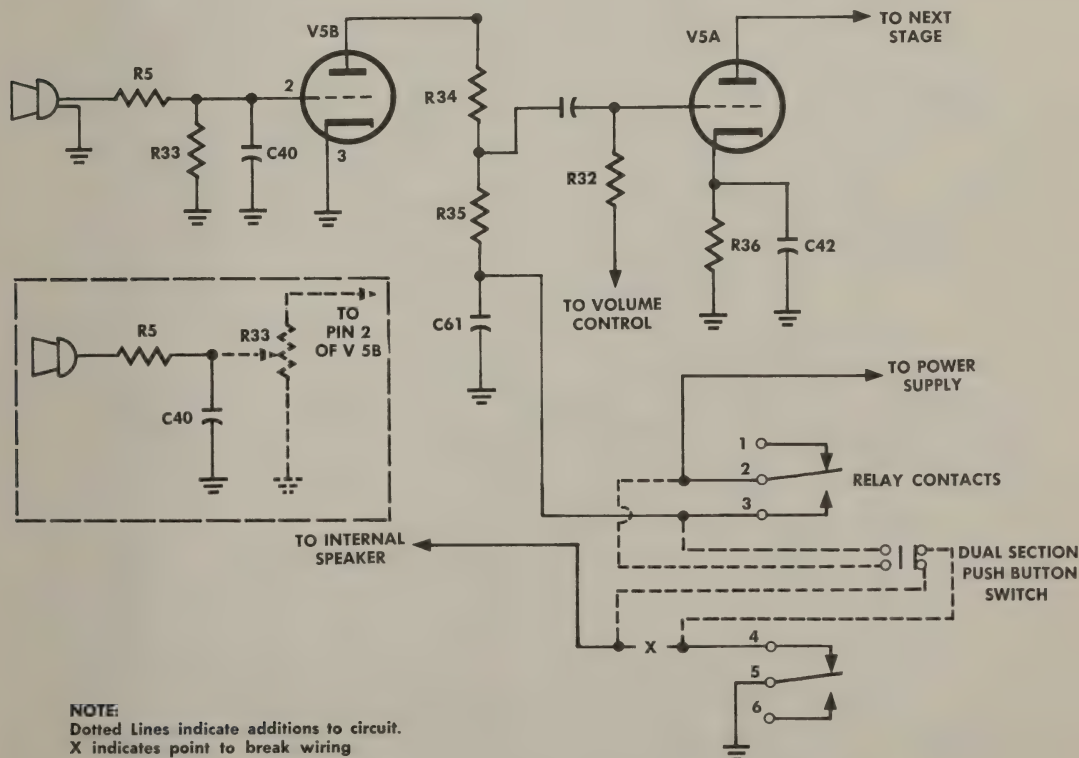


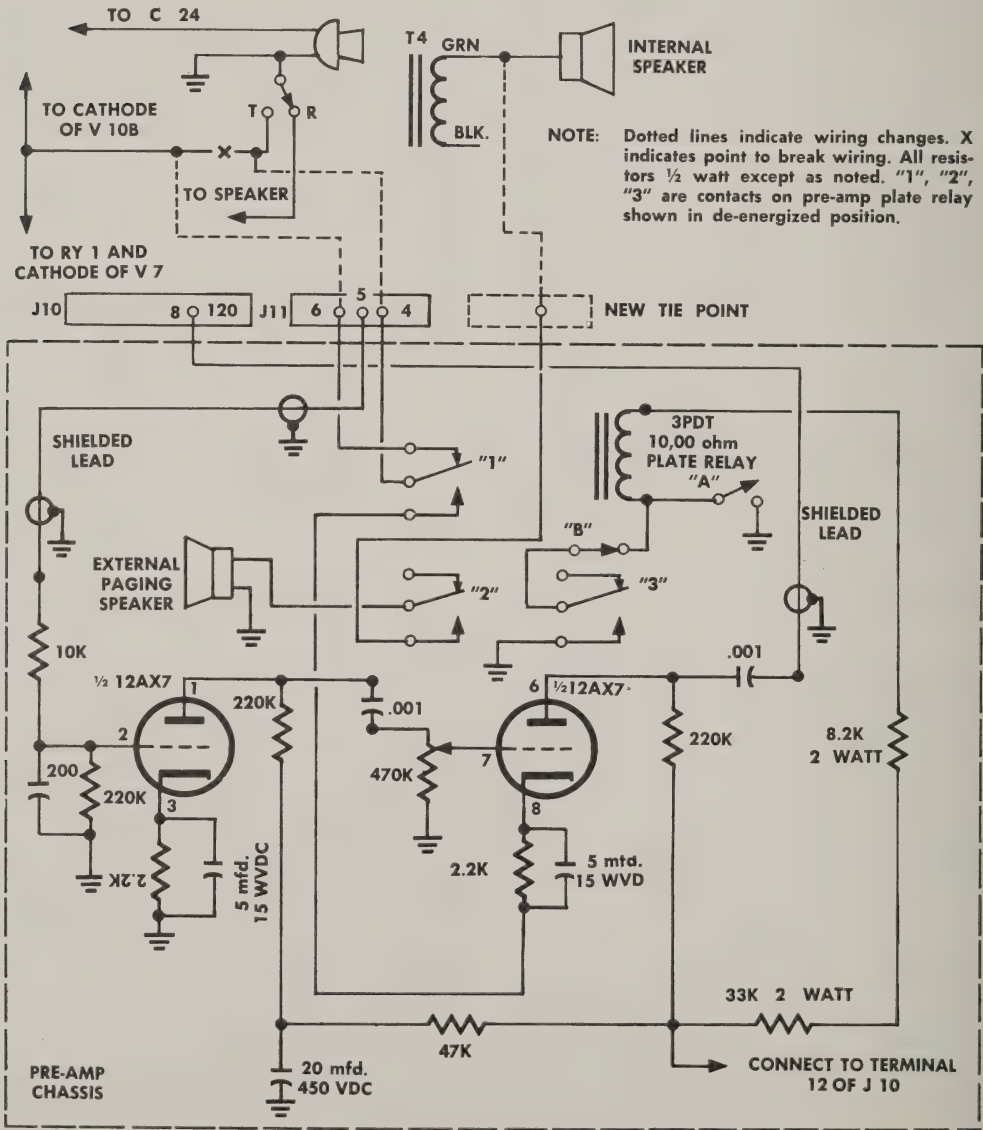
FIGURE 4

though you must turn this control wide-open when transmitting. Another alternate is the use of an audio "L" pad across the external speaker leads. This latter choice is perhaps a little better than changing R-33 although it requires that the "L" pad be mounted externally due to its physical size.

Going to the other extreme, the Johnson Messenger Two has to have an external pre-amp stage to effectively use this set. It is added to the unit as shown in Figure 5. With the external pre-amp, the modification is quite effortless and saves much time.

This particular conversion is a little more elaborate than necessary but in the long-run is a real work-horse.

The relay shown on Figure 5 is used to provide a rather automatic function. Pushing button "A" (buy a switch with a red button) locks up the pre-amp relay connecting the pre-amp into the set. Pushing the mike button is all that is now necessary to put the external speaker into action. At the same time you can leave the P.A. feature operating and receive calls through the paging speaker. To de-energize the P.A.



system, push button "B" (use a black button here) and the relay will release, putting the internal speaker back to normal so you can transmit and receive.

You are probably asking why the Johnson Messenger Two has to have the external pre-amp. Going back to Figure 3, the Johnson unit has the squelch control circuit connected directly to the second audio amplifier stage. To make the original circuit function as simply as we want it to would require extensive wiring that would most probably cause more problems than wanted.

Applying the foregoing conversions to other sets is just a matter of ingenuity.

CHANNEL 24 — continued

Actually, the monitoring of radio conversations in particular is governed by the provisions of the Communications Act of 1934, Section 605. The provisions of this Act are very broad and only have been clarified, somewhat, in recent years. Basically they boil down to the following:

- (a) Any illegal radio use, such as transmitting without a valid station or operator license (where the latter is required), is not protected by Section 605 against interception and disclosure.
- (b) The FCC may intercept your radio calls and use the information so obtained for the purpose of enforcing the Communications Act and the Commission's rules.
- (c) Monitoring a shared radio channel, for the purpose of effective shared use, and reporting to the FCC improper use by other sharers, does not appear to constitute a violation of Section 605.
- (d) Any use of information obtained by such monitoring for your own purpose, such as pirating the other user's business, is prohibited.

The above summary, at the usual risk of over-simplification, may be found useful as a quick reference guide. There is, of course, a more detailed analysis of the case law.

A little attention should be paid to item (c), however, since considerable mention has been made in the past about the fact that you could not monitor another CB'er's

transmission without his consent. This is partly true.

Let us see what a lawyer, who has practiced in the communications field for years, has to say; "Monitoring a shared frequency (CB'ers are in effect sharing channel space) and reporting to the Commission a **rule infraction** can be defended as not violating Section 605 on the theory that every licensee who accepts a grant (CB'ers are not given a specific frequency assignment but rather a limited number of channels, all shared with other CB'ers) on a share frequency gives his implied consent to the other sharers of the frequency to listen to his transmissions and to take all actions which may be reasonably necessary to comply with the provisions of the Commissions' rules requiring cooperation between the sharers." The comments inserted in brackets in the above quote are CB Horizons but it would appear that this statement would indicate that you could report the violations of others. The given explanation is certainly reasonable. But, bear in mind that so far there hasn't been a court case to test this theory. CB Horizons hopes to report on the feelings of the Federal Communications Commission on this point before long.

Remember though, you still cannot intercept and disclose a message from one CB'er to another without consent of the CB'ers involved unless a substantial rule infraction occurs. Even at that, it would be unwise to report a violation to anyone including the FCC until it is clarified by the Commission.

LOSS OF A CB FRIEND

The sudden and unexpected death of Senator Estes Kefauver of Tennessee comes as a blow to CB'ers everywhere.

Senator Kefauver was fast becoming one of the **real champions** of the CB cause. His interest in the troubles of the little people . . . CB'ers everywhere . . . was typical of the long and honorable service this gentleman paid to his country

To our knowledge, the report and photo of Senator Kefauver, appearing in the August issue of CB Horizons, was the last "official" occasion when this great Senator turned a sympathetic ear to the CB'ers problems.

NEW -

REVISED FCC FORM 505

At some date between now and early December, the Federal Communications Commission will release to a waiting CB world a brand new version of tried and tested FCC Form 505.

The new form has been in the 'drafting stage' in Ivan Louck's office for six months. But like many similar government activities and functions it has been slowed down time and time again in government red tape.

The new form is unique for many reasons, not the least of which is the ADP or automatic Data Processing function that goes with it.

ADP processed forms will be handled by machine. Unless your form 505 has some special problems, it will not see the light of day except as it rolls through the FCC's new data processing equipment.

According to Ivan Loucks (see **Interview With Ivan Loucks**, July issue of *CB Horizons*), the new ADP forms will be processed within 72 hours of the time they arrive in the Commission's Gettysburg, Pennsylvania offices. This means that once the machinery starts to roll, and assuming that your form is filled out properly, you could conceivably mail in an application on a Monday and have your new license back by the following Monday. Much better than the present 6-9 weeks for processing!

There is no connection between the \$8.00 license application fee, which goes into effect this coming January 1, and, the ADP form. The new form will, according to FCC sources, go into effect **before** the \$8.00 fee does. However, the \$8.00 fee will go into effect on January 1, so the new

revised form 505 reflects this by noting "4. Enclose appropriate fee with application, if required."

This means that fees **will be** required on any applications that will **arrive** at the Commission on or after January 1, 1964. Note the word **arrive**. If you mail in an application by regular mail from California on December 27, you might as well enclose the \$8.00 because it probably won't show up at the Commission until after the January 1 holiday.

THE FORM

The form has two sides, as shown here. The actual final form of the form **may be** something different than that shown here. Horizons was fortunate enough to acquire a set of the forms when they were still in the composition room of the U.S. Government Printing Office, before Ivan Loucks and his staff had time to go over the form and make last minute changes.

The major changes between all present and past Form 505's and the new ADP version of 505 are as follows:

- (1) Under question two, if your business is operating under a trade name, you are required to give the name of the individual or individual(s) doing business. If yours is a partnership, you list the name of all partners.
- (2) Your mailing address must include the Zip Code Number, under question 3.
- (3) Question 13 asks "Will the stations be operated by any person **other** than the applicant, members of his immediate family or his employees?" If you answer yes, you have to list each such person and give detailed explanation of their relation-

APPLICATION FOR CLASS B, C, OR D STATION LICENSE IN THE
CITIZENS RADIO SERVICE

DO NOT WRITE IN THIS BLOCK

1. Application for class A station license must be filed on FCC FORM 400.
2. Complete on typewriter or print clearly.
3. Be sure application is signed and dated. *Mail* application to Federal Communications Commission, Gettysburg, Pa., 17325.
4. Enclose appropriate fee with application, if required. DO NOT SUBMIT CASH. Make check or money order payable to Federal Communications Commission. (See Part 19, volume VI of FCC rules to determine whether a fee is required with this application.)

1 NAME OF APPLICANT BUSINESS NAME (OR LAST NAME, IF AN INDIVIDUAL) FIRST NAME (IF AN INDIVIDUAL) MIDDLE INITIAL			9 DOES EACH TRANSMITTER TO BE OPERATED APPEAR ON THE COMMISSION'S "RADIO EQUIPMENT LIST, PART C," OR, IF FOR CLASS C OR CLASS D STATIONS, IS IT CRYSTAL-CONTROLLED? (If no, attach detailed description: see subpart C of Part 19)		YES	NO
2 IF AN INDIVIDUAL OPERATING UNDER A TRADE NAME, GIVE INDIVIDUAL NAME; OR IF PARTNERSHIP, LIST NAMES OF PARTNERS (Do not repeat any name used in item 1) LAST NAMES FIRST NAMES MIDDLE INITIAL			10 A. WILL APPLICANT OWN ALL THE RADIO EQUIPMENT? (If no, answer B and C below) B NAME OF OWNER C IS THE APPLICANT A PARTY TO A WRITTEN LEASE OR OTHER AGREEMENT UNDER WHICH THE OWNERSHIP OR CONTROL WILL BE EXERCISED IN THE SAME MANNER AS IF THE EQUIPMENT WERE OWNED BY THE APPLICANT?			
3 MAILING ADDRESS NUMBER AND STREET CITY STATE ZIP CODE COUNTY OR EQUIVALENT SUBDIVISION			11 HAS APPLICANT READ AND UNDERSTOOD THE PROVISIONS OF PART 19, SUBPART D, DEALING WITH PERMISSIBLE COMMUNICATIONS FOR WHICH THIS CLASS OF STATION MAY BE USED?			
4 CLASSIFICATION OF APPLICANT (See instructions) ☐ INDIVIDUAL ☐ ASSOCIATION ☐ GOVERNMENTAL ENTITY ☐ PARTNERSHIP ☐ CORPORATION ☐ OTHER (Specify):			12 WILL THE USE OF THE STATION CONFORM IN ALL RESPECTS WITH THE PERMISSIBLE COMMUNICATIONS AS SET FORTH IN PART 19, SUBPART D?			
5 CLASS OF STATION (Check only one) ☐ CLASS B ☐ CLASS C ☐ CLASS D			13 WILL THE STATION BE OPERATED BY ANY PERSON OTHER THAN THE APPLICANT, MEMBERS OF HIS IMMEDIATE FAMILY, OR HIS EMPLOYEES? (If yes, attach a separate sheet listing the names and relationship of all such persons and give a detailed reason for their operation of your station)			
6 IS THIS APPLICATION TO MODIFY OR RENEW AN EXISTING STATION LICENSE? ☐ YES (Give call sign): ☐ NO			14 IF APPLICANT IS AN INDIVIDUAL OR A PARTNERSHIP, ARE YOU OR ANY OF THE PARTNERS AN ALIEN?			
7 DO YOU NOW HOLD ANY STATION LICENSE, OTHER THAN THAT COVERED BY ITEM 6, OF THE SAME CLASS AS THAT REQUESTED BY THIS APPLICATION? ☐ YES ☐ NO			15 IS APPLICANT THE REPRESENTATIVE OF ANY ALIEN OR ANY FOREIGN GOVERNMENT? (If yes, explain fully)			
8 TOTAL NUMBER OF TRANSMITTERS TO BE AUTHORIZED UNDER REQUESTED STATION LICENSE (Number)			16 WITHIN 10 YEARS PREVIOUS TO THE DATE OF THIS APPLICATION, HAS THE APPLICANT OR ANY PARTY TO THIS APPLICATION BEEN CONVICTED IN A FEDERAL, STATE, OR LOCAL COURT OF ANY CRIME FOR WHICH THE PENALTY IMPOSED WAS A FINE OF \$500 OR MORE, OR AN IMPRISONMENT OF 6 MONTHS OR MORE? (See instructions. If yes, attach a separate sheet giving details of each such conviction)			
			17 IF APPLICANT IS AN INDIVIDUAL OR A PARTNERSHIP, ARE YOU OR ANY PARTNER LESS THAN 18 YEARS OF AGE (LESS THAN 12 YEARS OF AGE IF FOR CLASS C STATION LICENSE)?			
			18 IF THE PRINCIPAL LOCATION WHERE THE STATION WILL BE USED IS DIFFERENT FROM THE MAILING ADDRESS (ITEM 3), GIVE THAT LOCATION. (DO NOT GIVE POST OFFICE BOX OR RFD NO.) NUMBER AND STREET CITY STATE IF LOCATION CANNOT BE SPECIFIED BY STREET, CITY, AND STATE, GIVE OTHER DESCRIPTION OF LOCATION			
			DO NOT WRITE IN THIS BOX SCREENING ☐ Y ☐ N SIGNATURE ☐ Y ☐ N			

SIGN AND DATE THE APPLICATION ON REVERSE SIDE

19. IF APPLICANT IS A NONGOVERNMENTAL CORPORATION, ANSWER THE FOLLOWING ITEMS:		YES	NO	20. IF APPLICANT IS AN UNINCORPORATED ASSOCIATION, ANSWER THE FOLLOWING ITEMS:		YES	NO
A	IS CORPORATION ORGANIZED UNDER LAWS OF ANY FOREIGN GOVERNMENT?			A	IS ANY OFFICER OR DIRECTOR OF THE ASSOCIATION AN ALIEN?		
B	IS ANY OFFICER OR DIRECTOR OF THE CORPORATION AN ALIEN?			B	ARE MORE THAN ONE-FIFTH OF THE VOTING MEMBERS OF THE ASSOCIATION ALIENS OR REPRESENTATIVES OF ALIENS, FOREIGN GOVERNMENTS OR REPRESENTATIVES THEREOF, OR CORPORATIONS ORGANIZED UNDER THE LAWS OF A FOREIGN COUNTRY?		
C	IS MORE THAN ONE-FIFTH OF THE CAPITAL STOCK EITHER OWNED OF RECORD OR MAY IT BE VOTED BY ALIENS OR THEIR REPRESENTATIVES, OR BY A FOREIGN GOVERNMENT OR REPRESENTATIVE THEREOF, OR BY ANY CORPORATION ORGANIZED UNDER THE LAWS OF A FOREIGN COUNTRY?			C	IS THE ASSOCIATION DIRECTLY OR INDIRECTLY CONTROLLED BY ANY OTHER ORGANIZATION? (If yes, give detailed explanation)		
D	IS APPLICANT DIRECTLY OR INDIRECTLY CONTROLLED BY ANY OTHER CORPORATION? (If yes, answer items E through K below)			USE THIS SPACE FOR ANY ADDITIONAL INFORMATION OR REMARKS			
E	GIVE NAME AND ADDRESS OF CONTROLLING CORPORATION						
F	UNDER THE LAWS OF WHAT STATE OR COUNTRY IS THE CONTROLLING CORPORATION ORGANIZED?						
G	IS MORE THAN ONE-FOURTH OF THE CAPITAL STOCK OF CONTROLLING CORPORATION EITHER OWNED OF RECORD OR MAY IT BE VOTED BY ALIENS OR THEIR REPRESENTATIVES, OR BY A FOREIGN GOVERNMENT OR REPRESENTATIVE THEREOF, OR BY ANY CORPORATION ORGANIZED UNDER THE LAWS OF A FOREIGN COUNTRY? (If yes, give details)						
H	IS ANY OFFICER OR MORE THAN ONE-FOURTH OF THE DIRECTORS OF THE CONTROLLING CORPORATION AN ALIEN? (If yes, answer items I and J below)						
I	TOTAL NUMBER OF DIRECTORS IN CONTROLLING CORPORATION						
J	LIST ALL OFFICERS AND DIRECTORS WHO ARE ALIENS IN CONTROLLING CORPORATION AND GIVE BRIEF BIOGRAPHICAL STATEMENT FOR EACH ALIEN						
	NAME	NATIONALITY	OFFICE HELD				
K	IS THE CONTROLLING CORPORATION IN TURN CONTROLLED BY OTHER COMPANIES? (If yes, attach information for each of these controlling companies covering the information requested in items E through J, above)						
				☐ YES ☐ NO			

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND IMPRISONMENT. U.S. CODE, TITLE 18, SECTION 1001.

ALL THE STATEMENTS MADE IN THE APPLICATION AND ATTACHED EXHIBITS ARE CONSIDERED MATERIAL REPRESENTATIONS, AND ALL THE EXHIBITS ARE A MATERIAL PART HEREOF AND ARE INCORPORATED HEREIN AS IF SET OUT IN FULL IN THE APPLICATION.

I CERTIFY THAT:

- The applicant has (or has ordered from the Government Printing Office) a current copy of Part 19 of the Commission's rules governing the Citizens Radio Service;
- The applicant waives any claim to the use of any particular frequency or of the ether as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise;
- The applicant accepts full responsibility for the operation of, and will retain control of any Citizens Radio Station licensed to him pursuant to this application;
- The station will be operated in full accordance with the applicable law and the current rules of the Federal Communications Commission;
- The said station will not be used for any purpose contrary to Federal, State or local law;
- The applicant will have unlimited access to the radio equipment and effective measures will be taken to prevent its use by unauthorized persons; and
- The statements in this application are true, complete, and correct to the best of my knowledge and belief and are made in good faith.

**DO NOT OPERATE UNTIL YOU HAVE YOUR OWN LICENSE.
USE OF ANY CALL SIGN NOT YOUR OWN IS PROHIBITED.**

SIGNATURE:

(Check appropriate box below):

☐ INDIVIDUAL APPLICANT

☐ MEMBER OF APPLICANT PARTNERSHIP

☐ OFFICER OF APPLICANT CORPORATION OR ASSOCIATION

☐ OFFICIAL OF GOVERNMENTAL ENTITY

DATE SIGNED: _____

ship to you as the station's licensee, and explain why they should be allowed to operate your station.

(4) Under question 18, they want to know if the principal location where the station will be located is different from the mailing address.

(5) After you have filled out all of the applicable questions, the Commission writes a short statement for you. It is on the bottom of the second page, and it reads (in part) . . .

"I certify that:

The applicant has (or has ordered from the Government Printing Office) a current copy of Part 19 of the Commission's Rules governing the Citizens Radio service:

The station will be operated in full accordance with the applicable law and the current rules of the Federal Communications Commission:"

Then you sign the application, date it and send it on it's merry way to Gettsburg and Automatic Data Processing.

But the real interesting point is the second sheet (not illustrated here) that will come

with all new revised Form 505's.

At the top it states that it is an order blank for "... a current copy of the Federal Communications Commissions Rules and Regulations; Volume VI, Part 19." The form provided is convenient and designed to extract your \$1.25 per copy from you as painlessly as possible.

NEW FORM 505'S DELIVERED TO FCC SEPTEMBER 16th

Horizons Publications has been advised that the U.S. Government Printing office was scheduled to deliver to the offices of the FCC 500,000 copies of the new revised ADP form 505 on the 16th of September.

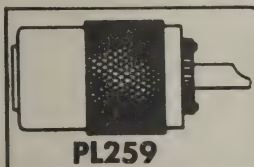
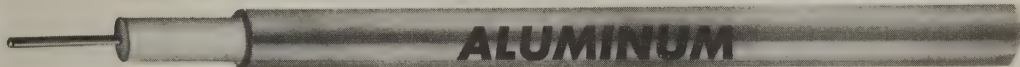
The two sides of the form, illustrated with this article, were returned to the Government Printing office marked "OK to Print" on August 21st.

The only changes the FCC made, from the form-proofs shown here, were minor including setting some words with capitals, and moving around of a few lines of type.

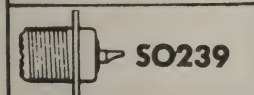
You should be able to start bugging your local FCC office for copies of the new form any day now.

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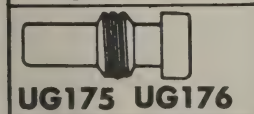
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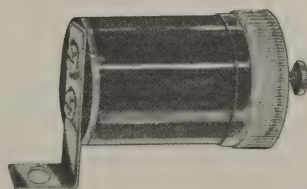


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About Mobile Antennas

The purpose of a Mobile antenna is simple: to couple as much of the RF energy from the transmitter into the ether as possible, and to extract as much such energy from passing waves as possible, for the receiver.

Unfortunately, accomplishing this two-fold purpose is far from simple.

A look at almost any antenna reference book—even some rather recent ones directed at CB users!—shows that a number of mutually contradictory factors are involved. In other words, to satisfy all the requirements of a good Mobile CB antenna something's got to give!

For instance, to put the RF energy out with maximum efficiency, the antenna should be exactly a quarter-wavelength long electrically (about 108 inches, for a straight rod).

But to take the energy in, the antenna should be much longer. The longer, the better, and there's no upper limit.

Adding to these two contradicting requirements, you have physical limitations such as height above pavement. Other considerations include possible mounting positions on or about the vehicle body, and something called "feed-point impedance" which we'll examine in detail a bit later.

Thus, it's obvious that the "perfect" Mobile antenna will never be built. To see in detail just what each of these requirements amount to and how important each is, let's take a closer look.

TRANSMITTING ANTENNA LENGTH

To get a good grasp of the importance of length in a transmitting antenna, you first have to know just how a radio wave travels along any wire or conductor.

You probably already know that RF energy is very similar to ordinary alternating current, or AC, such as that which powers all your home appliances. In this

kind of current (as opposed to DC, like a car battery,) any particular small portion of electric "charge" (An engineering-type term, used here for want of a clearer non-technical word, meaning a congregation of electrons. Electricity is nothing more than "charge in motion") goes down the wire for a short distance, stops, reverses its motion, and comes back to its starting point.

Each small bit of charge keeps up this "alternating" motion so long as the current is flowing; the net effect is something like having a row of ping-pong balls in a tube with a spring at one end, and pushing the ball at the other end in and out. The spring also moves in and out, following the motion of the ball, though it may be many feet away.

The term "cycle" is used to mean one complete alteration, or trip of a single charge from the starting point as far as it goes and back to the starting point again. From this, we get the familiar "cycles per second" as a measure of the speed with which the current flow alternates.

Ordinary power lines alternate their current flow at a rate of 60 cycles per second, while CB radio operates at frequencies in the neighborhood of 27 million cycles per second. However, both have the same behavior so far as the alternating path of the charges on the wire are concerned.

Now, let's visualize a piece of wire that ends in an open circuit. Nothing is connected to the far end.

When a bit of charge reaches that open end, it can't keep going. At the same time, it has accumulated some energy and basic laws of physics say it can't stop short either. The only thing it can do is to bounce back down the wire in the opposite direction.

This is exactly what happens at the midpoint of each cycle, anyhow. And so, if the wire happens to be just exactly long enough that the charge reaches the open end at the

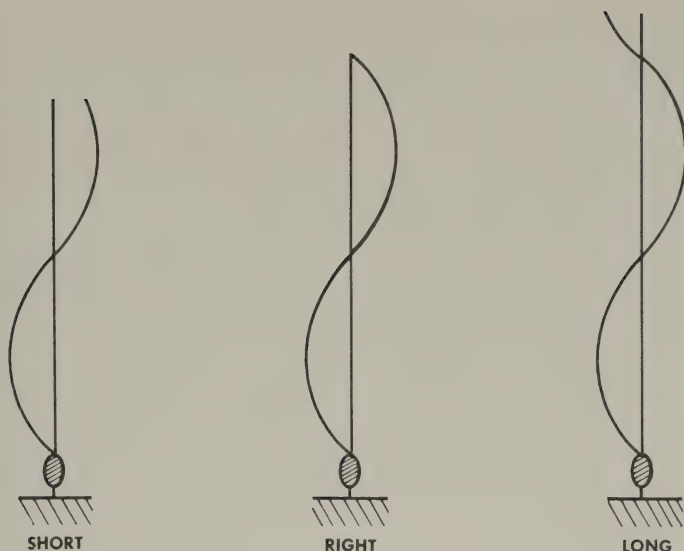


FIGURE 1

midpoint of a cycle, the charge can't tell that the open end is open at all. It would act just the same if the wire extended on an infinite distance!

If the wire is a little bit too short for this to happen, the charge will bounce back from the end too soon and interfere with the following bit of charge which is still going forward. If the wire is a little bit too long, the same thing will happen.

But if the wire is just right, the charge can't tell it's open. And under these conditions, power will flow into the wire even though it apparently has no place to go.

The answer, of course, is that it flows out from the wire into an ever-expanding "field" which is just another and more complicated way of saying the wire is acting like a good transmitting antenna.

From this explanation it might appear that for any specific frequency, only **one** antenna length would be useable for transmitting purposes. Actually, you know this is not the case.

If the length is just a little bit off, the antenna will still perform (although not so well). In practice, an antenna cut to the right length for the middle of the band (channels 10 or 11) will perform properly over all 23 channels.

And our explanation was based on a straight wire, of such small diameter that it had no effective capacity to ground.

Practical antennas are always larger than this; the larger the antenna, the more capacity they have — and the larger the capacity, the faster the charge will travel. As a result, the thicker the antenna the shorter it must be to be the "right" length.

In addition, there is one "right" length that is the shortest antenna which can perform in this manner — and any number of near-even-multiples of this length which will also behave in the same manner. For CB use, this "shortest" length is approximately 108 inches.

RECEIVING ANTENNA LENGTH

In receiving, the goal is reversed. Instead of coupling RF energy **into** the atmosphere, you want to pull it back out.

While a "resonant" antenna (that is, one of the exact length necessary for transmitting) will outperform other length antennas of **approximately** its same size, it will **not** receive as much energy as a non-resonant antenna which is much larger.

The reason for this is that a receiver responds to **voltage** rather than to power, and the longer the receiving antenna is, the more voltage will be developed at its terminals.

Thus, as mentioned earlier, for a good receiving antenna the main thing you need is length.

This is usually not a very important factor in Mobile installations, since an

antenna long enough to show exceptional receiving improvement would be too long for mobile use. However, when choosing an antenna it's one thing to remember.

TYPES OF MOBILE ANTENNAS

Because of all the conflicting requirements, you can today take your pick from a vast number of CB Mobile antenna types.

Basically, however, this multitude of antennas represents only three basic types. Once you know the differences between the three basic kinds, and the advantages and disadvantages of each, you can then choose your own antenna strictly on its other merits (brightness of chrome, means of mounting, etc.).

FULL LENGTH WHIPS

The oldest, simplest, and in the minds of many people still the most efficient type of mobile antenna is the "full-length" whip.

This type of antenna consists of a metal or conducting-type plastic rod which is exactly one quarter wavelength long (or 108 inches, the "right" length mentioned earlier). Sometimes it is shortened to 102 inches, to allow 6 inches for a base-mounting spring.

In theory, the full-length whip is the most efficient antenna possible, since everything in it adds directly to the radiat-

ed power.

In practice, though, since the full-length whip stands a full 9 feet high, it's restricted to a bumper-mounted position for most of us. Nine more feet on top of the vehicle is just too much for most tree limbs and bridges.

And the bumper position is probably the least desired place on a vehicle to mount an antenna. Most of the transmitted power is absorbed by the car's body; relatively little of it gets out.

For this reason, the full-length whip has given way in many cases to various "loaded" types which are shorter and offer more mounting versatility.

To sum up, advantages of the full-length whip are (1) highest efficiency and (2) simplest construction. Its major disadvantage is its 9-foot length.

LOADED SHORT WHIPS

To overcome the major disadvantage of the full-length whip (its length), you must shorten the antenna. This would pose problems when transmitting, but for the fact that a physically short whip can be made to look "full length" to the transmitter energy in it by adding a "loading coil" somewhere along the line.

The coil can be at the base, in the middle, at the top, or anywhere in between. Different designers follow different ideas

SOLID LINE: SHORT ANTENNA CURRENT DISTRIBUTION

DOTTED LINE: FULL SIZE ANTENNA CURRENT DISTRIBUTION

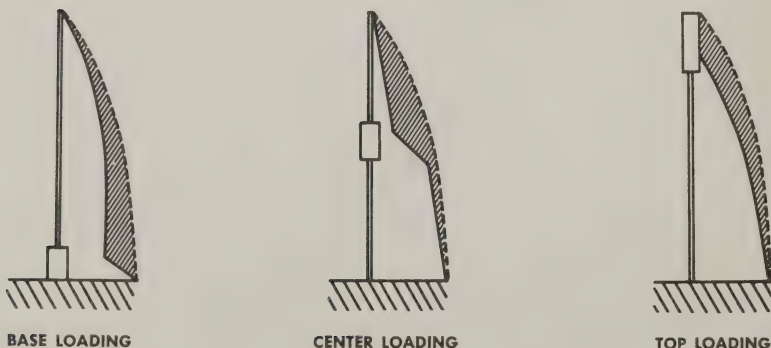


FIGURE 2

in coil placement, and this is one of the major reasons why there are so many Mobile antennas to choose from.

A base-loaded whip offers greatest physical strength, since the relatively heavy coil is located right at the mounting point. However it is electrically the poorest for reasons we'll go into a little later.

The top-loaded whip is electrically the best, but offers the least strength of any because the coil is out at the top of the whip. It also offers electrical problems of getting the coil to work right because there is so little whip above the coil.

The center-loaded version is a compromise, both electrically and physically, between the other two.

A few paragraphs back, we said we'd go into the electrical properties of loaded whips in more detail.

For the greatest efficiency, you want the part of the whip which carries the most current to be as far above ground as you can get it.

This will always be the part of the whip below the coil, and coil positioning has a great effect on the intensity of the current as well. And there is always a sharp change in current, right at the coil location.

A base-loaded whip has less current flowing in it at any point than a full-length whip would have. Thus, it is electrically poorer than a full-length whip.

A center-loaded whip has approximately the same current flowing below the coil as would flow in the corresponding part of a full-length whip. Above the coil, the current drops sharply. The merit of the whip depends on how high up the coil is.

A top-loaded whip has the same characteristics as a center-loaded one, except that the high-current region would extend higher. Sometimes, the high-current region goes high enough that more current flows than in the corresponding part of a full-length whip.

The great advantage of a loaded whip is that, being shorter, it can be mounted on the top of the vehicle. Here, it gains 3 to 8 feet advantage over the bumper-mounted length whip, and gets away from the close proximity to the car body which

handicaps the full-length whip even more.

Thus, although in theory a loaded antenna is always less efficient than a full-length one, in practice the top-mounted loaded whip will almost always outperform the bumper-mounted full-length job.

Helical (Distributed-Load) Whips

In the past few years, helically-loaded whips have become popular. These, when properly designed, can outperform any other kind of antenna. But if not designed and used properly, they can also be the poorest kind of whip to use, so you must check out the one you plan to use quite carefully.

The helical whip is a loaded type, but in this one the loading coil is extended to cover the full length of the whip. Such an antenna can be designed to have almost any current distribution you like, and the better-designed helical whips do provide extremely high current flow almost all the way up.

A whip of this design will outperform any other type of Mobile antenna while transmitting, regardless of theoretical considerations.

The one major shortcoming of the helical whip is its susceptibility to pickup of ignition noise. Apparently the loading coils in a base- or center-loaded whip acts as chokes to help filter out some of the spark-plug noise so prevalent in mobile reception. The helical and the full-length whips, not having these coils, cannot discriminate against the noise. So on receiving, the helical whip must take second place to the base or top-loaded variety.

MOBILE ANTENNA MOUNTS

Regardless of the type of whip you plan to use, you still mount it on the vehicle.

Older practice confined the antenna to one of three positions: the rear bumper, the rear fender, or the body cowl just behind the rear window at the side of the vehicle.

Newer designs allow much more flexibility; now you can mount an antenna almost anywhere on an auto body, and have your choice of any number of mounts.

But even in all these types of mounts, some classification and discussion is

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TRAVELIER transceiver

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- Highly readable 2 1/2" square "S" meter with front panel zeroing control
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- Measures maximum forward antenna current for antenna tuning — used in conjunction with reverse position — measures relative standing wave ratio (SWR)

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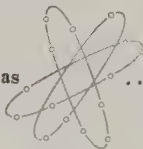
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RaTtL

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Hum-m-m **BOOM! BOOM!**

**stops
noise!**

CLATTER!

murmur
 murmur
 murmur

How does the 717 sound? Crisp, smooth and peaking for the highest efficiency and articulation. There's plenty of power in any transceiver on the market. And *no noise!* But don't take my word for it. Test the new E-V 717 on your rig today, and you'll see. antec you'll like how you're heard. Electro-Voice, Inc., 532CB, Buchanan, Michigan

possible.

One of the easiest ways to classify—but the least meaningful — is by the type of connection between antenna and mount.

In the older days, all mobile whips ended in a $\frac{3}{8}$ -inch by 24-pitch male thread at the bottom, and all mounts were threaded to fit. Thus, any whip could fit any mount.

This arrangement is still known as the "standard" mount, and almost all kinds of antennas are available with "standard" fittings.

It can be installed in a matter of minutes, and can be removed equally rapidly. For use on a rented car for instance, it has no equal.

The major disadvantage is that it restricts antenna position to the rather undesirable back bumper location.

THE BODY MOUNT

The body mount, as its name implies is a permanent mount which attaches to the vehicle body. This is the standard mount of the commercial two-way radio.

This kind of mount requires at least one hole in the body; most require one large hole and three smaller ones.

It offers complete protection for the feedline, but does result in marring of the car's paint and body by the drilling of the holes.

THE COWL MOUNT

The cowl mount is for placement in the "normal" car-radio antenna position, just in front of and at one side of the windshield. It is designed to look and mount like a standard car-radio antenna; unlike the body and bumper mounts, this kind hardly ever comes with "standard" $\frac{3}{8}$ by 24 fittings.

Though it mounts to the car body, this mount requires no holes if you already have a car-radio antenna. Just remove the regular antenna, put this mount on in its

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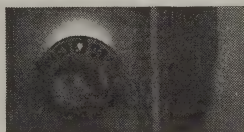
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Bringing the RG-58/U feedline into the car body for running to the mobile, feeds through a rubber grommet, from the outside bumper mount.

THE TOP MOUNT

The best location, all the experts agree, for a mobile antenna is in the center of the vehicle's roof.

For this reason, the top mount is popular with many CB'ers. This type of mount usually requires that a single hole be drilled in the roof of the auto; the mount then attaches either by threading into the hole or by clamping through from the underside.

It shares both the advantages and the disadvantages of the body mount, with the added extra provided by the favorable location.

CONCEALED-BRACKET MOUNTS

Since many persons hate to mar the finishes of their autos, a number of manufacturers make concealed-bracket mounts.

These mounts usually consist of a strap of thin steel, shaped in such a way that the point of attachment to the car can be hidden under the trunk lid or beneath a door frame, while the whip itself is out in the open.

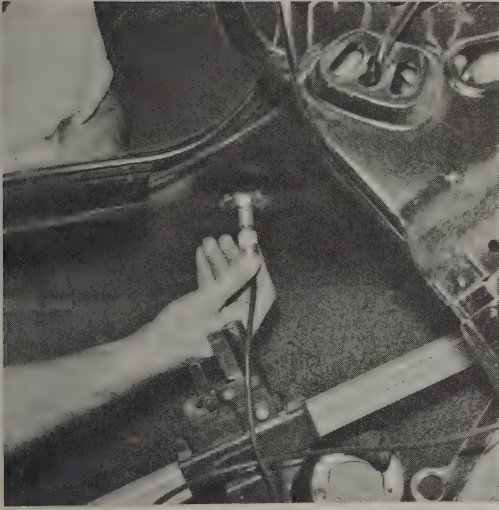
Unless it's well made, a mount of this type tends to be over-flexible. Also, the

A special kind of 'concealed-bracket' mount is the gutter mount. This one attaches to the vehicle in the rain gutter at the side of the vehicle's roof. Two versions are available. One, manufactured by Utica (the Buddy Whip) allows the antenna to collapse down flush with the vehicle roof when the auto is to be garaged or driven where low hanging objects are a hazard. The second is a quick connect-disconnect version by Antenna Specialists which includes a spring loaded clamp for the gutter (see photo) a base loading coil and a 42 inch stainless steel whip. The coax for the ASP antenna feeds down around the clamp and can be fed in through the wind-wing when the antenna is to be used on a temporary installation.

POSITIONING THE ANTENNA

One of the big factors entering into the choice of a Mobile antenna is the final position in which it will be mounted. It's not going too far to declare that the mounting position most often dictates the antenna choice.

For instance, a full-length whip is not too useful for top mounting—and no one would consider putting an 18-inch helical



A body mount usually incorporates a threaded (or grooved) cylinder to which your PL-259 coax connector on the end of the feedline from the transmitter mounts, as shown here. This eliminates soldered connections that are exposed to the elements of the trunk.

whip on the back bumper!

As pointed out previously in this chapter, almost every factor in Mobile antennas involves some compromise. The biggest of these compromises involves the two factors of height and length.

As a general rule, height is more important. If you can get it in a high clear position, and 18-incher will usually outperform a much longer whip which is not so favored in position.

For this reason, the center of the roof is the preferred position. While the side-mount (such as the gutter) is just as high, the center is better because of the even expanse of metal surrounding the base of the antenna in all directions.

But in some types of vehicles (notably convertibles), the roof center is unusable.

For these, the windshield-corner-post or cowl mount is the next best choice.

Third best is the rear deck position popular with men.

Coming in last by a goodly margin is the rear-bumper position. The rear-fender spot is almost as bad.

Besides height, another important consideration is safety. This means not only safety for the antenna, from low trees and

the like, but safety of pedestrians and other drivers. A 9-foot whip hanging back from a floppy spring is a lethal weapon!!

Common sense is your best guide here. If you're using the bumper, use the left side rather than the right to keep the whip as far from pedestrians as possible.

TUNING AND RESONATING THE ANTENNA

When the position is chosen and the antenna mounted, the final step for outstanding performance is the tuning and resonating of the complete antenna system.

This involves adjusting the antenna, the feedline length, and the transmitter so that the maximum possible RF power is radiated. The object, naturally, is to get the greatest possible usable range from your Mobile unit.

The tools you'll need will depend to a large degree upon the type of antenna you choose. Only test equipment necessary is some sort of fieldstrength meter, but an SWR meter helps and can, if available, be substituted for the FSM.

USE OF THE FIELD STRENGTH METER

To use a field-strength meter properly, the meter itself should be located at least 50 feet away from the antenna being tuned.

Then, the transmitter power input should be checked. Make a note of it, because power input should be maintained at the same level throughout the antenna-tuning procedure.

Next step is normally to trim about $\frac{1}{8}$ inch off the top of the antenna (with a helical whip, unwind one turn of wire at the top end). Check the FSM to see if the reading goes up, or down.

If the reading went down, recheck the transmitter power input to make sure it remained constant. If it did, then the antenna needs no further tuning. If not, readjust it to the starting level and recheck the FSM.

If the FSM reading went up, and the transmitter power level remained the same, then you are proceeding in the right direction. Trim off another $\frac{1}{8}$ inch or one

CONTINUED — page 55

To the one man in four who should own transistorized CB equipment

It's time someone cleared the air over transistorized CB units. Do they really make sense? What can they do—and what are their limitations? Who should buy them, and why?

A magic word—*transistors*. Even to the most sophisticated engineer, it has a ring of the exciting, mysterious future about it. To most of us, it almost irresistibly implies a vast superiority in performance.

Unfortunately, this compelling but vague idea is costing a lot of CB'ers—unnecessarily—a great deal in money, exasperation and disappointment.

Who stands to gain with transistorized equipment?

Make no mistake about it—solid-state transceivers offer many unique advantages. But they are *important* advantages only in certain kinds of applications.

The majority of CB'ers today use it primarily for personal communication. Their mobile operations are irregular and infrequent compared to base station activity. Most of their vehicles are pleasure cars where space is no particular problem. To these, transistors may have no genuine advantage.

But if you are among the one in four to whom CB has a predominantly serious purpose . . . if you use it frequently in mobile situations . . . if you use it regularly in business, commercial or industrial enterprise . . . if you actively participate in REACT or other local emergency groups . . . *then you have good reason to consider a transistorized set.*

What are the limitations of solid state transceivers?

First, let's explode a myth. Transistor units *do not outperform tube sets*. Period. Most units on the market are measurably inferior to conventional sets in sensitivity, power input, and/or selectivity.

Here at Hallicrafters, hundreds of thousands of dollars and a decade of the most advanced military transistor design experience have resulted in a new transistorized unit, the CB-5

MARK II, whose basic performance equals the better tube devices. *Equals—but does not exceed.*

So if it's simply "maximum range" you're after—don't waste your money on transistors. You'll get comparable distance with a tube transceiver for *at least 25% less*.

Then there are the minor annoyances of conducted noise and transistor "hiss." The first creates very tricky installation problems (or *did* until we finally licked it with an equally tricky toroid filter in the MARK II).

Nothing yet known entirely eliminates the slight but ever-present residual hiss in the A.F. amplifier in *all* transistorized equipment.

Finally, you *do* have to pause a breath's worth before talking. Reason: The reliable transistorized units actually are hybrids; the several miniature tubes in the amplifier final take a split second to warm up. (Even the most expensive industrial equipment is hybrid.)

The real benefits of transistors

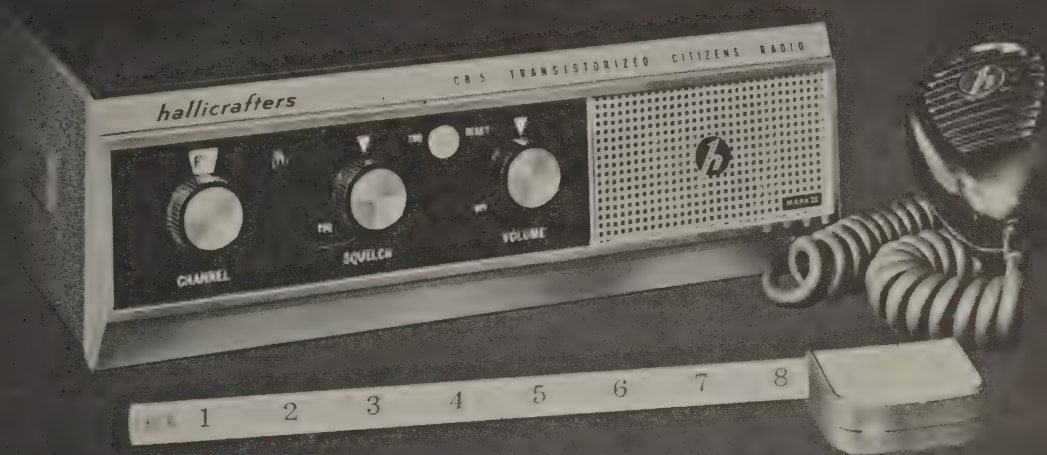
Oddly enough, the major benefits are mechanical rather than electronic, although the extra reliability is worth considering. The size advantage is obvious (our CB-5 MARK II, for instance, will fit in a Volkswagen glove compartment and leave room for gloves)—and critically important in most commercial or compact vehicles.

Battery drain is so low as to be negligible. A well-designed unit will draw less than .225 amps in standby; leave it on all night and you'll have used *less battery power than is required to start your car once*. You need neither heavy-duty battery nor generator—a big advantage to the regular operator.

Equally important, transistors make practical the marvelous flexibility of *full-power* portable operation with a battery pack—indispensable for industrial field use, agriculture, traffic control, sporting events, field trips and the like. All in all, if you can use these advantages, good transistor equipment is a *very* good investment. If you are among the one in four, you'll find worthwhile the reading on the next page.

the new ideas in electronics

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P5-120 AC Power Supply. Slim matching pedestal for CB-5 MARK II. Size: 10 1/4" x 2 1/4" x 6 3/4". Optional at just \$44.95.



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A high-performance citizens band transceiver, reflecting the most advanced and practical concept of transistor design.

An entirely new principle of noise suppression—the result of many months of experimental work—employing a new nickel alloy high-permeability toroid filter has **virtually eliminated conducted noise pick-up.**

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Six crystal-controlled channels • Provision for HA-15 built-in selective call (optional at \$54.95, available now) • 100% modulation capability. **\$219.95.**

SPECIFICATIONS

5 watts input; 100% modulation capability; 6 crystal-controlled channels; 1 μ v sensitivity for 10 db. S/N ratio; 45 db. adj. channel rej.; PTT ceramic mike; 6 kc. selectivity at 6 db.; 18 transistors, 9 diodes, 3 instant-heat transmit tubes.

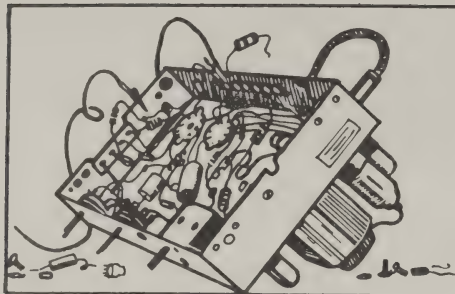
If you're sold on tube equipment, the field-proven excellence of our eight-channel, dual-conversion CB-3A will be verified in detail by your CB dealer. **\$159.95.**



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5th & Kostner Aves., Chicago, Ill., 60624

Overseas Sales: Export Div., Hallicrafters. Canada: Gould Sales Co., Montreal, P. Q.



TECH TIPS

FOR CB'ers

84 MILE RANGE NEEDED

What's a good antenna for our telescoping mast? We want to reach out to a distance of 84 miles, as we run an ambulance service, and need this distance.

Don N. Allen, 20Q4782
Wayland, New York

Answer

84 miles? The fellow that sold you your CB transceivers was pulling your leg! 84 miles even in a business band service with 500 watts on the base is **highly** unlikely. Especially in your part of the country. Now if you had a 8,000 foot mountain such as the western boys have, to work from, it **might** be possible. But not where you are in western New York. Better stick to the telephone when you get more than 20 miles out.

REPAIRING FIBERGLAS WHIPS

I have on my mobile rig a four foot fiberglass antenna, mounted on an extension bar so that the antenna is above the roof of the car. During a winter cold snap when the temperature dropped to below 10 below zero, the fiberglass became brittle and while pulling away from a parking space, the antenna struck a tree limb and the outside covering on the antenna was torn off the top of the antenna.

I repaired this break by peeling the coating to a point below the winding, which is almost $\frac{1}{2}$ the length of the antenna. After removing this I placed a piece of TYGON tubing, which is clear and waterproof, over the bared area and replaced the plastic tip that came with the antenna. I then cemented the top and bottom of the tubing with

three coats of General Cement number 24-2 TENNAKOAT which is clear and corrosion resistant.

The TYGON tubing is available from Chemical supply houses and is very flexible. TYGON can become brittle if it gets cold enough, but most areas do not have this kind of temperature extreme.

TYGON could be used over the entire length of the antenna, as it is clear, it gives a nice attractive, waterproof appearance.

For my work I used $\frac{1}{2}$ inch diameter TYGON tubing.

(Editors Note: Very hot weather will also cause some fiberglass coverings to crack, especially when an antenna has been at rest for several hours in nearly 100 degree weather, and then is driven quickly to highway speeds with the flexing that goes with it.)

Walter G. Schill, 19Q0944
Ludlow, Kentucky

STRAYS



Ozzie:

Recently an All-State 5 crystal T & R came into our possession, without schematic. We don't know where to find any data on this set, even who makes it. We need crystals but don't know what to buy. Can you help?

H. A. Budd, KCC4071
Box 597
Woodbury, N.J.

Budd—

Best source of crystal information is one of the crystal manufacturers such as Texas or JK. A schematic may come your way as a result of our printing this.

FOR A REAL



powerhouse Signal



Convert your signal to DOUBLE SIDEBAND MODULATION CONTROLLED CARRIER (DSMCC) with the

ELENCO SIDEWINDER

*Watch the S meters kick up
when you modulate!*



- ★ Goes with the transceiver on any voltage, 110, 12 and 6 volts.
- ★ The SIDEWINDER can be used to advantage with all other accessory units
- ★ No special receiving equipment required.
- ★ No tuning adjustments of any kind required to operate SIDEWINDER.

- ★ Works on 95% of all sets in use;
if the RF power output tube in your set has a screen grid, and
if the screen resistor on this tube is 10,000 ohms or higher,
the SIDEWINDER can be used.
- ★ Standard 90 day warranty, plus LIFETIME service warranty

Available at leading CB dealers nationwide. If no local dealer, order direct from factory. Send check or M.O. for \$30.00. We will ship postage and insurance prepaid. CAN'T WAIT? . . . order by phone, direct dial 219-563-4536, and we will ship same day, C.O.D.

\$29.50

L200 series

LINEAR AMPLIFIERS

Designed for use with transceivers anywhere in the range 26/30 Mc.



L200-AM (illustrated)
less power supply

\$150.00

L200-A, built-in AC supply
for base use

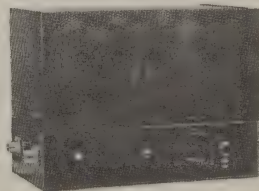
\$225.00

- ★ DC plate power input rating, AM 200 watts;
DSMCC, DSSC, or SSSC 400 watts.
- ★ Drive requirements for maximum rated input,
3 watts AM, 12 watts DSMCC, DSSC, or SSSC.
- ★ Built-in automatic antenna transfer circuit.
- ★ Designed to accommodate remote control operation.

DM-1000 dynamotor supply, to operate either of above units mobile from 12 v. battery, \$75. PS-250 AC power supply, to operate L200-AM on base, \$100.

POWER GAINER

Audio Compression Amplifier



*The standard of comparison
in its field*

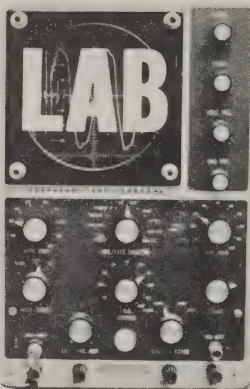
Provides transmitter boost
— receiver boost with only
3 connections to your rig.

All models

PG-1, 110 volts
PG-12, 12 volts
PG-6, 6 volts

\$45.

ELECTRONIC ENGINEERING CO. WABASH, INDIANA



REPORTS

OF PRODUCTS TESTED
BY OUR ENGINEERS

OLSON "2" SPOTTER

The Olson "2" Spotter is the latest version of a popular 12 channel transmit, 23 channel receive CB communications transceiver from the folks at Olson Electronics, Inc., 260 S. Forge Street, Akron 8, Ohio.

Olson's Audio-Visual Spotter, the original unit, has been distributed through Olson Electronics stores across the country, and through Olson's mail order catalogue department.

The new unit has been re-designed in a number of important areas. Appearance wise its front panel has been through a considerable face-lifting. The new front panel is one of the most striking on the market today.

The tuneable receiver is a dual conversion unit using 3.5 megacycles as the first i.f. range and 595 kilocycles as the second i.f. range.

The receiver rf amplifier tube is the tried and tested 6BZ6 operating as a pentode. Receiver sensitivity is excellent.

The first conversion to approximately 3.5 megacycles is done in $\frac{1}{2}$ of the 6U8 mixer. The conversion beat signal is provided by a 24.0 megacycle crystal.

The second half of the 6U8 (triode) is the oscillator at 24 megacycles.

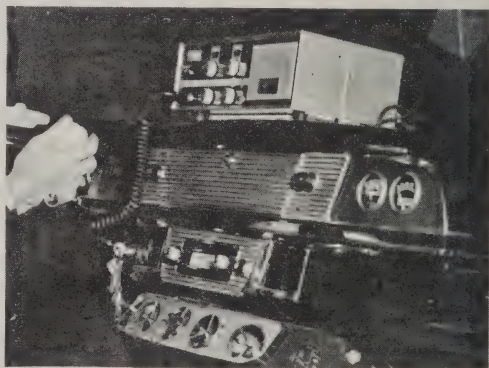
The second conversion stage is done in another 6U8. The second conversion oscillator at approximately 2.9 megacycles is not crystal controlled, primarily because at this low frequency it is not required.

Two stages of 6BJ6 (pentode) i.f. amplification follows the jump down to 595 kilocycles. Double tuned input and out-

put circuits on each of the i.f. amplifiers make for good tuneable receiver selectivity. A rather standard noise clipper (1N34 diode), squelch and detector stage uses a 12BR7 type tube.

Audio amplification is in a 7687 husky pentode which provides plenty of drive for the 6AQ5 audio output tube and modulator combination.

The transmitter is a single tube affair, using a 6CX8 triode as the oscillator and the pentode section of the 6CX8 as the final amplifier.

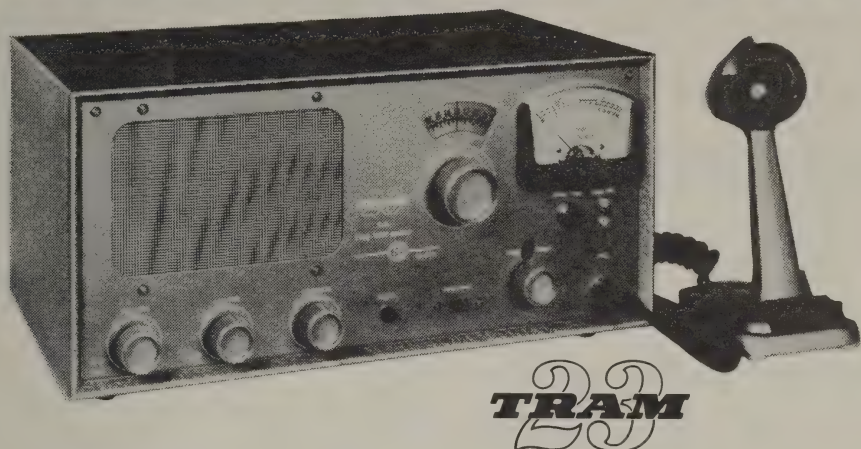


The 6CX8 has been neutralized on the new unit; this makes for improved operating conditions on transmit and probably increases the efficiency of the transmitter over the older model.

Transmitter and receiver audio are both very good. Measured audio on the transmitter carrier peaked just over 90% for normal speech. Power output of the transmitter varied between 2.9 and 3.2 watts as it arrived from the factory, over four channels spread from 1 to 23.

The Olson "2" comes equipped for 117

TRAM TR-27E TRAM



ANOTHER STEP FORWARD IN CB COMMUNICATIONS TR-27E BASE STATION

Transmitter

70% or better Transmitter efficiency provides 3.5 watts guaranteed minimum RF Output with 100% High Level Modulation. (Keyed Compression - Base Station)

Receiver

Sensitivity - .1 uv. for 300 milliwatts of audio
Selectivity - 5 kc. @ 6 db. Adjacent channels 60 db. down
Signal to Noise Ratio - .3 uv. for 10 db.

TRAM SERVICE TIP No. 2

RECEIVER DIAL CALIBRATION

If ever the tuning dial setting is high or low on all channels, set the dial to channel 1, 2, or 3 and, with a signal of known frequency, adjust the second conversion oscillator ceramic trimmer for maximum "S" meter reading.

If your TRAM has a spot switch, set the transmit channel selector to the desired low channel, set the tuning dial to the corresponding channel, push the spot button and adjust the trimmer for maximum "S" meter reading.

This trimmer is mounted on the tuning condenser bracket in all base stations and on the chassis between the tuning condenser and the channel selector bracket in all mobiles.

The TRAM 23 base station, renowned for its superior performance and dependability under the most exacting conditions, is now offered in an improved model, the TR-27E. In addition to the many features that are standard on all TRAM units, you will find:

- The "s" meter is now a D'Arsonval moving coil type with an illuminated panoramic scale, accurately calibrated to 60 db over S9.
- The cabinet now has an extra durable wrinkle finish.
- The 23 channel selector switch carries the channel number illuminated in the panel.
- The receiver overload characteristic is improved by 20 db.
- Adjacent channel rejection is improved by approximately 5 db.
- And in many other respects the overall excellence of TRAM equipment has been given extraordinary consideration and effort.

ALSO AVAILABLE: TR-27D, 8 channel Base Station
TR-70B, 8 channel Mobile
TR-27C, 23 channel Mobile

TRAM ELECTRONICS, INC.
P.O. Box 187, Dept. 11A
Winnisquam, N.H., 03289

Please send by return mail at no obligation, detailed information and specifications on TRAM Citizens Band equipment.

Name _____ Call No. _____
Street _____
City _____ Zone _____
State _____ Zip Code _____

TRAM



ELECTRONICS INCORPORATED

P.O. BOX 187, DEPT. 11A

WINNISQUAM, N.H., 03289

TEL. 603-524-0622

vac operation and 12 vdc operation. Conversion to 6 vdc is discussed in the manual provided.

The power supply is a vibrator type for dc operation.

We found that as good as the receiver selectivity is, it can be improved measurably by adding a one turn link of No. 22 (or similar) plastic covered hook up wire around i.f. coil T7P, and running the hook up wire to a jack on the back of the set, which you provide. Now run a piece of RG-58/u, with the shield grounded to the Spotter chassis at the jack end, to the antenna input terminals on any receiver that tunes the broadcast band (540 to 1600 kc). If you happen to have a communications receiver that tunes the broadcast band (such as a Hallicrafters, National, Hammarlund products, etc.), so much the better.

Now tune your second receiver to 595 kc and turn the audio down (way down) on the Spotter. You are now converting the 595 kc i.f. signal down to the i.f. range of your 595 kc tuning receiver. This gives you triple conversion and several degrees of added receiver selectivity.

This will probably only work if you do not have any operating AM broadcast stations in your area in the 580 to 610 kc range.

If you do this with a communications receiver you will gain the use of the bfo, filters, etc. associated with the communications receiver and probably find that sideband CB, reception is now possible, where it was not previously.

Price on the Olson "2" is \$119.95.

SONAR MODEL G

It has been nearly two years since we reported to readers of CBH on the performance of Sonar's Model E transceiver. The words still ring true.

We noted, at the time, that the model E had such excellent receiver selectivity and rejection of un-wanted splatter from adjacent channels that it's single conversion performed like most double conversion receivers. And we didn't see where Sonar was hurt by dropping the additional conversion stage.



Well, the Model G is an improvement.

The Sonar Model G is an 8 channel crystal controlled transceiver with an additional 23 channel tuneable receiver. It has an 'S' and 'RF' meter (lamp illuminated), polished grey and blue case and panel, and is generally a fine looking set.

It operates from 6 to 12 vdc and 115 vac. Power input on the set we ran on the lab bench for 60 days varied from 4.7 watts at the end of the test period to 5.05 watts at the start of the test period.

Crystals supplied were all well within tolerance.

The model G has two big features going for it. Foremost among these is the amount of transmitter modulation punch.

We thought we had a defective unit when we unpacked it and plugged the set in. The modulation percentage whopped way over against the pin. Everything seemed to be OK, so we went a little further. Grid drive was OK. Carrier shift under modulation was not measurable, so everything seemed normal. Except the amount of modulation.

Curious we set out to run field checks on our 'G'. 15 miles away we couldn't find any detectable sign of the un-modulated carrier, but, when modulated the audio was still there and pretty readable.

This prompted us to write Dan Klein at Sonar and ask what the story was? Did we have a defective unit.

Dan wrote back "the over-abundance of transmitter audio to which you refer is really audio restricted to a narrow-band of 300 to 3,000 cycles per second. The model

G restricts its RF power to the authorized bandwidth of 8 kc and does not create 'sideband splatter' . . ."

Which is what we found. We just weren't sure that is what it was supposed to do!

Boiled down to basics, the Model G has gobs and gobs of transmitter audio. It's not hard to hear if you are within range!

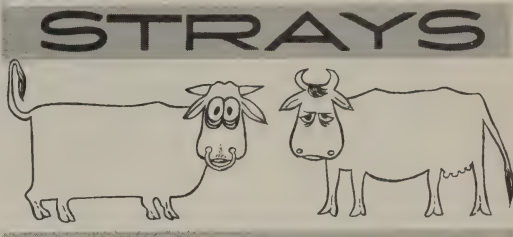
The second feature we'd like to discuss is the receiver selectivity. The sideband skirts (i.e. ability of the receivers to reject signals off channel) are excellent. Eight tuned circuits in the receiver's i.f. make for better receiver selectivity than you will normally need.

However, with the fine tuning receiver comes a problem. The small 1/2 inch diameter receiver tuning knob, the same knob that is on the Model 'E', is simply too small to give the operator a proper feeling of the selectivity. A larger knob would give the option of better mechanical bandspread to the operator who likes to "feel" his selectivity.

Finally, we would like to see an external crystal socket on this set. Eight channels are

usually all that you need, but there's still no guarantee that the 8 in your set will be the 8 you need!

The Model 'G' is now available in Canada under DOT approval as the Model 'GC'. Price category in the United States is \$230.00.



Dear Ozzie—

Regarding the July issue, 'Quad Antenna for CB.' I liked the article and my thanks to both CBH and authors Hancock and Nevill for the enlightening information. I intend to build the quad, but would also like to contact manufacturers of this type of antenna first. Who makes them?

Leland D. Snyder K1C6438
Blossvale, New York

Leland:

Suggest you drop a line to Mr. Sharping at Cubex Company, 3322 Tonia Avenue, Altadena, California and ask for data on his model CBQ quad for CB. Price is around \$45.00.

Ozzie

the Amazing
BUDDY TR-11 Citizen Band Transceiver



Custom Built
by
MARINA

Dependable Range: Flat terrain,
clear channel, mobile to mobile 12
miles. Base to mobile 20 miles with
base antenna 40 ft. above ground.

The finest Citizen Band Transceiver on the market, with no exception. If you don't agree after a ten day trial your money will be cheerfully refunded.

BUDDY TR-11 with one set of crystals, Turner 350 Mic., less power supply	\$179.50
12 Volt Transistor Power Supply with connecting cable	55.00
115 Volt A/C Power Supply with connecting cable	35.00
Mobile Mounting Brackets	4.95
Set of Crystals (1 each Transmit & Receive) any CB Frequency	6.00

**IMMEDIATE DELIVERY: ALL PRICES F.O.B. SANTA MARIA, CALIFORNIA
DEALER INQUIRIES INVITED**

Please send me information on TR-11
MARINA COMMUNICATIONS, Inc.
Santa Maria Public Airport
Santa Maria, California

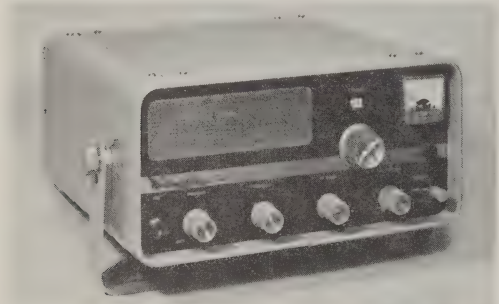
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ADDRESS _____
CITY _____ STATE _____

DATELINE - "CB INDUSTRY"

NEW PRODUCTS, SERVICES FOR 2-WAY RADIO

SONAR'S NEW 23 CHANNEL RADIO

Sonar Radio Corporation's Chairman of the Board, Jim Liebman, was in Ozzie's office recently (as we were going to press) and while there discussing the future of CB with Publisher Cooper, Ozzie sneaked a look into Jim's briefcase where Jim had a glossy photo of the new 23 channel Sonar transceiver.



The model FS-23 (so it says on the front) looks like a real winner from this Brooklyn firm. It includes crystal operation on all 23 channels, built in selective calling, an rf gain control (good for adding sideband reception later), and a dual purpose S and rf meter. We're sure there are a lot of additional features under the hood, but we'll have to wait until Sonar gives us the full announcement before we can say what.

POLYTRONICS MODEL N-8

Polytronics Laboratories, Inc., working out of their new 13,000 square foot plant at 88 Clinton Road, West Caldwell, N. J. announces their new Poly-Comm N-8 CB transceiver, which they claim has more tubes than any other CB transceiver on the market today.

The deluxe 8 channel (crystal controlled) unit reportedly provides more even distribution of gain, greater immunity to battery and line voltage variations and greater AGC control.

Built for rugged performance, the N-8 has three stages of 455 kc i.f. amplification plus a 16 mc i.f. stage for a total of 16 tuned circuits in the receiver i.f. stages alone. This results in better than 60 db of adjacent channel rejection, according to the firm.

The N-8 also features a new sensitive noise

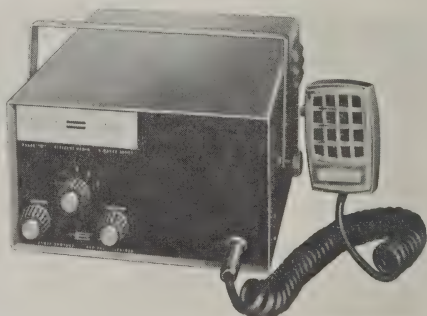


limiter squelch, Teflon covered wiring, a steel case and weather-proof speaker. It has provisions for adding the Poly-Comm selective calling unit.

The N-8 is available in 5 front panel colors, red, blue, green, black, or gray. Price is \$199.50 at Poly-Comm dealers everywhere.

MULTI-ELMAC'S NEW CD-5A

Multi-Elmac Company, 21470 Collidge, Oak Park 37 Michigan, has announced their newest version of the popular CD-5 transceiver, the CD-5A.



The new set is a five channel crystal controlled transceiver with improved operating features, including: a new noise-immune squelch, a new voltage doubler for higher B plus, a new modulator/audio output designed around the 6GW8, a tone alert accessory connector, and new styling. The unit operates from 6 or 12 vdc, and 117 vac. Price including a set of crystals and ac and dc power cords

is \$139.50. Write Multi-Elmac for the full story.

PEARCE — SIMPSON'S NEW ESCORT

Pearce-Simpson, Inc., 2259 N.W. 14th Street Miami 35, Florida has officially un-corked their new Escort transceiver, a deluxe unit with just about everything on it except a dingy.



The unit is designed for marine and land lubber applications in mind, including complete moisture proofing. The transistorized dual purpose power supply functions from 12 vdc or 117 vac.

The Escort features 8 channels plus an additional front panel socket, 8 illuminated channel markers that are synchronized to move with the channel selector and indicate the operating channel, and the 23 channel tuneable receiver. Also included is a crystal spot function for locating your transmitter on the tuneable receiver, and a wealth of other features.

For the full story, contact Len Haas at Pearce-Simpson.

GONSET ACQUIRED BY ALTEC-LANSING

Alvis A. Ward, President of Altec-Lansing Corporation, a subsidiary of Ling-Temco-Vought, Inc., has announced the acquisition of Gonset, Inc., formerly a division of the Young Spring and Wire Corporation. In making the announcement at Altec's headquarters in Anaheim, Ward also noted that construction has already begun on new facilities to house the Gonset operation at the Anaheim location.

Presently established in Burbank, Gonset has been active in the communications field for more than a quarter century. Gonset was one of the earliest manufacturers of CB transceivers, and who will forget their original G-11 and G-12 single channel units.

The transfer to the new Anaheim facility will be completed as soon as the 50,000 square foot plant is completed.

No changes are contemplated in Gonset's sales programs.

Texas Crystals has moved ahead again with the announced purchase of U.S. Crystals Company and plant in Los Angeles.

The Chicago branch of Texas was simultaneously closed down and the facility moved to Los Angeles, according to Bob Whan, President of the firm. The new L. A. facility will allow Texas to handle western orders with greater speed and accuracy, in the ever growing U.S. CB crystal marketplace.

do you
appreciate
Quality?

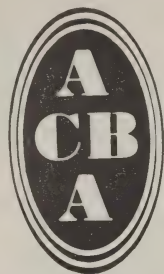


The U. S. Armed Forces do. That's why WonderShaft antennas produced by Columbia Products Company are in use in every one of our military services — meeting every rigid requirement for top performance from the ocean's floor to beyond the earth's atmosphere.

Your needs may not be as exacting, but the exclusive Columbia Products process incorporates the same high quality in every WonderShaft Citizens Band, Amateur or Commercial antenna.

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AMERICAN CITIZENS BAND ASSOCIATION



NEWS . . . NEWS . . . NEWS . . . NEWS . . . NEWS . . .

BOOSTER MEMBERSHIP DRIVE — GREAT!

Last month we reported that all ACBA members had been contacted relative to participating in the ACBA Booster Membership Drive.

To refresh your memory, here is how the Booster Drive works.

Any member, using forms and data provided by ACBA Headquarters, can sign up additional members. When the member has signed up five additional members, he is awarded a handsome "ACBA Booster" lapel pin, signifying that this member is a booster of the ACBA.

In the years ahead, at national and regional meetings and conventions, it will be the proud member indeed who wears and displays his or her Booster Pin. This will quickly single you out as not only a Charter Member, but as one of the **founding fathers** of the association who helped put the Charter Membership over the top with 10,000 nationwide members.

The Booster Pin applicants already number into the hundreds, late in August. To list all of these fine fellows would take more room than we have. However, here are the ACBA Charter members who had their Booster Memberships back to the ACBA within four days of the date the announcement went out.

Ira L. Lee
Henegar, Alabama
Ed. W. Runge
Kendalville, Illinois
Irvin Hummel
Fort Worth, Texas

Jerry Freeman
Anderson, Indiana
Robert D. Sturgis
Kendalville, Indiana
Clyde Melton
Tucson, Arizona
Ray Sible
Attica, Indiana
D. J. Goodman
Huntsville, Alabama
Alex H. McKay
N. Chilli, N. Y.
V. Tate
Richmond, Virginia
George B. Alexander
Martinsville, Indiana
Jack A. Baker
Detroit, Michigan
Raymond Cook
Huntsville, Alabama
L. D. Schad
Ft. Worth, Texas
Quillian Stallings
Barnesville, Georgia
Thomas Clark
Grandview, Indiana
Ed. Koeller
St. Louis, Missouri
Doug Stroup
Beaumont, Texas
Otto Derra
Ludlow, Indiana
Wendle Craig
Muncie, Indiana
Stephen M. Hrezo
Winter Haven, Florida

A tip of the ACBA hat to these fine Charter Members, Boosters all, and to the

Hey There
Mr. CB Dealer!

YOU SAY
YOU ARE NOT
IN THE
BONANZA PROGRAM?



For shame! Nearly 1,000 CB dealers across the land are sharing in the exciting fun of being a CB Bonanza Headquarters in their town. Every month CB Horizons Bonanza sends tens of thousands of CB'ers into their local dealer to check on the latest winning Bonanza numbers. Unless you are a Bonanza Dealer, your store simply cannot share in this increased store traffic!

Being a Bonanza Dealer doesn't cost — it pays! If a CB'er with a winning number validates his winning card in your store, **you win prizes too!** Find out all about the amazing CB Bonanza Program from CB Horizons today. No obligation — simply clip out the attached coupon and airmail it off to Dealer Service Manager at Horizons.

HP

Horizons Publications, Inc.
P. O. Box 1557
Oklahoma City 1, Oklahoma

CB Dealer Service Manager
CB Horizons
P. O. Box 1557
Oklahoma City 1, Oklahoma

YES Send me full details immediately on becoming a Bonanza Dealer. I want those winning numbers and the colorful Bonanza display in my store!

Store name

Address

City Zone State

Telephone Number

Person Requesting Information

.....

"PRO.!"

NOT A BUZZER!
You Get
the True
Signal
Tone!

\$6⁵⁰

KEY•municator
TRANSISTORIZED
TELEGRAPH KEY

Now at most radio distributors, a professional type cast metal telegraph key and ear phone at a low cost. Perfect for learning the code, and sending, qualifying for amateur license.

Plus Code characters and phonetics!
Easy method to learn code by tone!

DOW-KEY COMPANY
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NEW!
OFFICIAL DESIGN

**ACBA
DECALS**

CB'ers! Get Colorful ACBA Window Decals. Dress up Your Mobile Units or use at Base Station!

3" High-Yellow & Blk.

Support your ACBA. Order Now!

Special Club Deal — 12 Sets for \$9.00

CB SUPPLY CO. BOX 10621
Village, Okla.

Enclosed \$..... Please Rush sets of ACBA Decals

Name

Address

City & State

many hundred others who also are working so hard all over the country to put the ACBA Charter Membership over the 10,000 mark!

OUR ATTORNEY IS BUSY

Late in August, the ACBA Attorney delivered a draft form of the Articles of Association and the By-Laws for the Association.

The two sets of papers are now in the hands of the Steering Committee for study, and changes.

The Articles of Association, noting that the ACBA is a non-profit educational association formed under the corporate laws of the state of Oklahoma, examine and explain the purposes of the ACBA.

The By-Laws delve, in great detail, into the inner working of the association, how it is to be run by the members, what safeguards have been established to protect the membership, and how the membership is to be represented before the FCC, the manufacturers and the nation.

In next month's column, we hope to be able to announce that copies of both papers will be available.

Please do not write now for them, as they aren't legally available at this time.

Paul W. Thacker, 19W4747



MASTER MOBILE MOUNTS SOLD

The complete operation and facilities of Master Mobile Mounts, Inc. of Los Angeles has been purchased by Whitehall Electronics Corporation, according to data released by Whitehall President L. H. "Bob" Whan. Master Mobile Mounts will be operated under the Texas Crystals Division in Ft. Myers, Florida according to Whan.

Master Mobile has been a leading producer of citizens, amateur and commercial communications antennas, as well as other rf power units for the communications industry.

Mr. LeRoy Harris has been appointed Chief Engineer of the Antenna Division and Glen C. Tillach, formerly with Gonset has been appointed Chief Engineer of the Electronics Division for Master Mobile.

WIN! FREE CB EQUIPMENT IN *General* RADIOTELEPHONE COMPANY'S MONTHLY DRAWING!

This month *General* is giving
away a Model 615 SWR Bridge.



NO BOX TOPS! NO MONEY! NO CONTESTS!

DRAWING RULES: Enter by simply filling out the self-addressed post card below, and mail it to us before November 10th. The winner's name will be drawn, notified by mail, and announced on the inside front cover in *General's* January ad.

Drawing void in any locality or State where prohibited by law. Federal, State and Local Government regulations apply.

Prize winner will be selected in a random drawing conducted by Stanley R. Rader, Certified Public Accountant. Its decision, with respect to all phases of the drawing, will be final.

Entries limited to residents 18 years of age and older, of the United States and Puerto Rico. Employees and their families, of General Radiotelephone, General Dealers, Stanley R. Rader, Certified Public Accountant, and General Radiotelephone Company's Advertising Agency are not eligible.

★ ★ ★ ★ ★
Available now...



FREE!

General Radiotelephone's 1963 catalog: complete specifications, technical data and schematics on the Nation's most wanted CB and FM two-way Communications equipment. Fill in and mail the card below.

GOOD FOR NOVEMBER DRAWING ONLY



GENERAL RADIOTELEPHONE COMPANY
3501 West Burbank Boulevard
Burbank, California

- ☐ Please rush FREE the General 1963 Catalog.
☐ Enter my card in the CB Drawing!

NAME _____

CB CALL _____

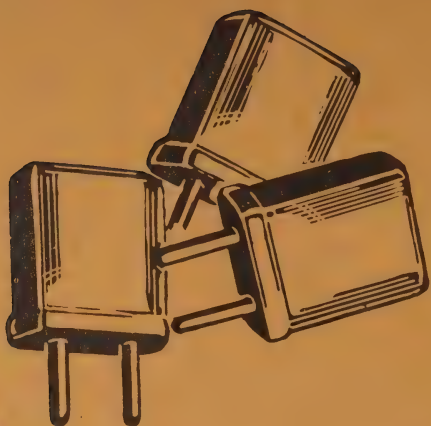
ADDRESS _____

CITY _____ STATE _____

NAME OF YOUR
LOCAL CB DEALER _____

DEALER'S ADDRESS _____

CITY _____ STATE _____



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CITIZENS COMMUNICATIONS



FIRST DISTRICT — KBA/KBB

Bay State Emergency Radio Service club members were commended by the Fall River, Mass. fire department for their help on bonfire patrols. Not quite two years old, this club has undertaken numerous projects to benefit the community. Particularly deserving of recognition is this club's practice of donating its headquarters as a meeting place for a group of handicapped people. The BSEMSC also furnishes them transportation to the rehabilitation center in New Bedford. Jim Mello, president, advises the members have accomplished a lot toward outfitting a camping trailer for emergency work. The BSEMSC has just become an auxiliary to the Fall River chapter of the Red Cross and will assist them with communications in all emergencies. Best of luck to your club in continuing a fine record of community service!

Bob Hughes, 1Q6820, reports heavy rains didn't stop CB'ers from Maine, Massachusetts, Connecticut, New Hampshire, New York and New Jersey—

from joining in the fun at the Vermont CB Jamboree. Their first jamboree was such a success, the Otter Valley Citizens Radio Club is already planning a bigger and better one next year. Bob serves as publicity director for the club, and edits "The Otter Valley QRM." Club headquarters are at the Brondon Fish & Game Club in Forestdale. Charles Pallutto, 1W3478, serves as president; other officers are Dean Carr, 1Q7182; Mary Hughes, KBA-1092; Beulah Carr, KBA3545.

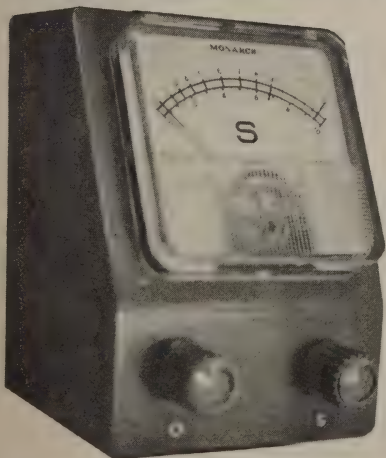
Thanks to CB'ers around Waterville, Maine who answered the call for blood donors in June — response was most gratifying.

Ipswich Fish & Game Club was the scene of North Shore Crystallites' first annual picnic.

Members of Channel Wanderers, Little Rhody CB'ers, Rhode Island Radio League, E.C.C.O. of Ashaway, R.I., Bay State Emergency Radio Service from Fall River, Mass., and many other CB'ers gathered together at Providence to conduct the organizational meeting of a CB Club Congress, first in this area. Guest speaker was Mr. McCormick, head of State CD Communications

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A tardy word of thanks to KBA0053 "The Wyoming Hillbilly" (Jean Romanoff), from our reporter KBA5750. Scene: A cold, rainy campsite 45 miles from Providence and several miles from the nearest phone. Cast: 42 Scouts and Scoutmaster Ken Knight. Plot: As tents were hastily being erected, it was discovered one of the large tents was missing. Unable to reach his base from mobile at that distance, Ken reports KBA0053 came to the rescue by relaying his call to the supply garage. Moral: Be Prepared!

Hosts for two summer outings for the Tri-County Emergency Communications Net were the Curtis Fraisers and Ann and Dick Brooks.

Hardie Taylor, 1Q2771, spotted a jack-knifed house trailer in the Waterville, Maine area. A call to June LaCroix, 1Q7198, brought a wrecker to the scene.

There were many CB'ers among the thousands who traveled to Maine to view the eclipse. The Pine Tree Five Watters of Bangor-Brewer and the Tri-County CB'ers gave all possible assistance to out-of-state visitors, recommending observation sites for good viewing and lodging information. "Happy to be of help," club members report.

Pine Tree Five Watters were formerly known as the Twin City Channel Masters. New club name was announced at their June jamboree. 150 CB'ers from Portland to Van Buren were served a pot luck supper; highlights was the drawing for 25 door prizes.

A gala jamboree was sponsored by the Stand-By Club of Biddiford, Maine. Held on the campus of St. Francis College, there were displays, QSL booth, a drawing for a Johnson Messenger, and a bar-b-qued chicken dinner.

The first annual CB Radio and Electronics Equipment show, sponsored by the Western Massachusetts REACT Team, was held at Chicopee Falls and was well attended.

Bell City CB Club is compiling a New England Travel Call Book. For copies, contact John Dempsey, 1669 High St., Bristol, Conn.

Enrol Engraving Company mails out monthly newsletters listing coming events of interest to CB'ers in the New England area. Your reporter, Ed Millett, finds the letters quite helpful. Clubs interested in receiving copies should contact Everett, 1W6216, at 36 Hampden St., Westfield, Mass.

Two ardent CB'ers, Red and Haz Russell, 1Q4872, recently journeyed from the shadow of the Bunker Hill Monument (Charlestown) to a jamboree in Missouri. Red reports that coming through Albany, N.Y. he copied a mobile unit in Boston.

Games, door prizes and chicken dinner were enjoyed by 250 CB'ers at the jamboree sponsored by the 5 Watt Whips of Lowell, Mass. Grand prize, a Browning Base set, was won by a lucky CB'er from Hudson, N.Y.

SECOND DISTRICT — KBG/KBH

Looking ahead . . . annual dinner dance for the Kings County Chapter of CBRRL will be October 12 at Georgian Terrace of Hotel Bossert in Downtown Brooklyn. Fabulous menu and entertainment are planned. Subscription \$10.00 each. Come one, come all!

Sol Prensny, 2W9056, is a member of Kings County Chapter and a published author. Latest works, published by Prentice Hall, is "Electronic Instrumentation." He's a professor of electronic engineering at Fairleigh Dickinson College in Teaneck.

Queens Chapter of CBRRL has temporarily lost a member to Uncle Sam. Peter Gugienheim, now answering to Private, is assigned to Company I, Fourth Training Regiment, Fort Dix.

A recently formed club in Brooklyn is called **The Brothers on 4** (guess their monitoring channel!). Club address is 4716 New Utrick Avenue. One project of the group is to guide and sponsor a group of youngsters too young for CB licenses, but who are interested in club activities — the auxiliary is aptly called **The Little Brothers on 4**. Parent group is headed by these officers: Dr. O. Lewis Levitt, Michael Feritti, Stan Gomer, Anthony De Sario and Thomas Walsh.

Call confusion: 2W7077 and 2W7707 are operating out of Rye, New York. The latter, a yacht club, has covered area boat races on the Sound.

2Q3150 sends a copy of the "Bergen County CB'ers Journal," a lively publication filled with

the comings and goings of the Jersey CB'er. Members of this club, serving the northeastern tip of New Jersey, conducted a jamboree September 8.

Attendance at CB gatherings during the summer were fair to poor for the New Jersey clubs. The sponsoring groups, usually CB emergency clubs trying to raise money, were disappointed in the results, reports KBG4454. Any ideas on why these affairs are failing?

New club name: **Troy Area CB Club** (formerly Lafayette CB Club), on eastern bank of the Hudson River, is headed up by Jack Coultry, KBG1812, as president; Russ Williams, KBG5030; Douglas Mulhall, 2Q0565; and Bob Tate KBG6100. Don't forget their steak roast September 22 at Half-moon Beach!

THIRD DISTRICT — KCC/KCD

The Eastern States CB Jamboree has come and gone! As this issue goes to press, we're awaiting word as to whether they topped last year's attendance mark of 497 operators and their families. As you know, there is a lot of behind the scenes work in producing such a successful affair — bouquets to these hard workers and their committees: Bernard Kline, KCC0651 Martin Kotzke, KCC4327; Earl Fox, 3Q2938; Paul Boyer, KCC1605; and Lester Sweigart, KCD1080.

FOURTH DISTRICT — KCF/KCG

Hub Citizens Band Radio Club formed a 14 car motorcade from Hagerstown to Deep Creek Lake for their annual picnic. Among the more than 50 persons attending were friends from the Mason-Dixon Club of Chambersburg, Pennsylvania. Stanley Grubbs writes that a very weary, but happy group of CBers returned to their northern Maryland homes after a day of boating and swimming. Any CB'ers from this call district who would be interested in joining the Hub Citizens may contact the president, Nels Garling, 4Q1208, at RE 3-8740.

FIFTH DISTRICT — KCI/KCJ

Thanks to Charles L. Webber for keeping us posted on progress made by Winchester-Frederick County CB Radio Club! Organized a few months ago to serve the northernmost tip of Virginia, the club has already acquired an emergency vehicle equipped with transceivers, first aid supplies, and limited fire fighting equipment. Dennis Snoby wields the gavel for this group; Dave Clowser is vice president; Charles Webber, secretary; Frank Holiday, treasurer. Club address is 723 South Kent Street, Winchester.

Nearly 600 North Carolina CB operators from High Point, Jamestown, Lexington, Thomasville, Clemmons, Advance, Asheboro, Burlington, Granite Quarry, and Greensboro attended the jamboree sponsored by the Winston-Salem club.

A hearty welcome is assured any visitor by The 10/100 Volunteers. Composed of members of the Cool Springs Volunteer Fire Department, these CB'ers aid in reporting and fighting fires, and provide traffic control. Their slogan is "Providing Emergency Radio Service for Iredell County." John Cline, KCJ1539, is president of the four month old club. Vice president is Richard Jenkins, Jr., KCJ2413; Bill Styers, KCJ2490, is secretary-treasurer. If you're mobile on US 64 east of Statesville, N.C. on any second Tuesday of the month, stop by the Cool Springs Volunteer Fire Dept. where the program begins at 8:00 p.m.

SIXTH DISTRICT — KDB/KDC

The Tri-State CB Jamboree at Kingsport, Tennessee was a great success. An estimated 2400 CB'ers and friends visited, exchanged QSL cards, dined, and had eyeball QSO's with CB'ers from approximately 15 states. Musical entertainment was furnished by several different groups, including the "Rock-A-Longs" of Kingsport. Our hat's off to these five local clubs who participated in the jamboree and operated the concession booths: The Johnson City CB Club, Tri-City Communications Club of Kingsport, Continental Radio Association of Bristol, The Elizabethton CB Club, and The Friendship CB Club of Blountville.

The Mid-Tenn CB Club of Gallatin, Tennessee has 66 enrolled members. Our thanks to Rose

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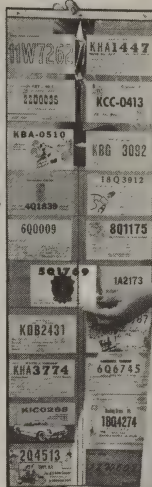
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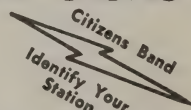
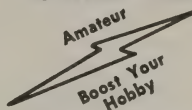
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SEVENTH DISTRICT — KDH/KDI

The Suncoast CB Club sponsored a jamboree featuring a water ski exhibition, horseback riding, boating and swimming. CB'ers from all over Florida had a great time at the one day event.

"CB Communicator" is published by the Shoreline CB Club of Sarasota. Recently elected club officers are: James Kelly, Dallas Adkins, Dick Hopkins, Ernie Cadle, and Bill Schob.

When vandals cut the cable from Siesta Key to the mainland, over 4,000 phones were useless. Ben Knisley, KDH2166, contacted Roland Wendt, 7W1913, to see if the Manasota CB Club could provide emergency communications. Allan and Betty Payne, Loran and Lucille Hand, Willie Yant, Tom and Dawn Strong, Dallas Adkins, Fred Brantley, Rick Jarman and Don Liddy were among the Sarasota/Manatee area who volunteered to relay emergency messages for residents of the island. The fire department furnished food and gasoline for the mobile units helping in the emergency. Within 24 hours the phones were back in service and the tired CB'ers went home for a much needed rest.

Many CB'ers whether club members or not, participated in a two day search for a boy missing in the rugged country outlying Sarasota. Walter Histed, editor of "Manasota CB Modulator," reports the search demonstrated that for short range communications it is hard to beat CB. The boy was found unharmed in a palmetto thicket and this successful conclusion of the hunt brought joy to all those who participated or had any small part in restoring the child to his family.

An honest-to-goodness luau gave members of the Manasota CB Club an opportunity to sport their Polynesian attire — lava lavas, muu muus, shifts and grass skirts. Guests were presented with leis and bestowed with an official Hawaiian greeting. After feasting and dancing, a refreshing dip in the moon-lit waters of the gulf was enjoyed by all. Geneve Wendt, KDH2386, chairman for the event, says the luau was the club's most successful event and they are already planning next year's. Until then . . . "Aloha!"

TENTH DISTRICT — KEG

The Fort Worth CB Club and the Channel 13 Club of Carswell Air Force Base collaborated in a drive to assist the Goodwill Industries in accumulating various items of value. The drive was a successful one, thanks to the generous spirit of Fort Worth residents.

Here are the results of recent elections by the Fort Worth CB Club: Berman Williams, 10Q0253, president; A. D. Beckner, 10Q1690, vice president; Joe Jones, KEG4618, secretary and treasurer.

A bigger and better success was this year's jamboree at Marshall, Texas. 1200 persons attended the affair.

Paso del Norte CB Club was organized by policemen and firemen from the El Paso, Texas area. Any other private citizen who is sponsored by a charter member may join. Their aim is for the betterment of CB and to provide assistance in local or national emergencies. Since this is a very new club, they would appreciate getting on the mailing lists of clubs across the country. They are specifically interested in ideas or suggestions on building an active, community service group. Mailing address is 5117 Paris Avenue, El Paso 24, Tex.

ELEVENTH DISTRICT — KEJ

New slate of officers for the Arizona Citizens Radio Association is comprised of Russ Hughs, KEJ1129, president; George Glotz, KEJ1269, vice president; John Barenshot, KEJ2336, secretary; Don Cook, KEJ5150, treasurer; and Al Butler, 11W9453, Dan Mungai, KEJ1625, John Catalano, KEJ6985, Ed Maxwell, 11W9632 are board members. Good luck, fellows! The ARCA promoted a window air conditioner for KFA1737 who is confined in a body cast with a back injury. He keeps the channel 22 alive acting as a relay and general information station in Phoenix.

The Maricopa County Emergency Communications team has recently elected a new vice president, Winston Brown, KEJ1483. This is a fine, energetic group, ever ready to assist in any

manner they are able for any kind of emergency. Our CCM, R. V. "Doc" Watson has been transferred from Phoenix to Holbrook, Arizona. He reports no active CB stations within ground wave distance so he is eager to give travel information to units traveling on US 66. He stands by on channel 22, 24 hours a day.

TWELFTH DISTRICT — KFC/KFD

The Five Watters of Monterey County, Inc., held a family picnic at Bolado Park near Hollister. It was a potluck affair and everyone had an enjoyable time. The clubs Police Communications Reserve handled communications for the Laguna Seca sports car races and for the Monterey Folk Festival.

Thanks to the Shasta Lake CB Radio Club of Redding for sending a copy of their club paper, "Static" to us.

The Cloud 5 Radio Club of Sunnyvale held their monthly outing in the form of a weekend camping trip.

Announcing the new officers of the Mission City CB Club of Santa Clara: Earl Pessoa, KFC4457, president; Frank Barcells, KFC4196, vice president; Ron Runswick, KFD0643, secretary; Bob Fernandes (call pending) sgt.-at-arms; George McCormick, KFD1792 and Charles Dall, KFC3245 on the Board of Directors.

Bruce Niles, KFC4423, presides over meetings of the Silver State Citizens Band Association of Reno. Completing the roster of officers are Wally Byassee, 12Q0222, vice president; Verna Keyes, 12Q0425, secretary-treasurer; Troy Keyes, 12Q0425, sgt.-at-arms; K. O. Cunningham, 12W4642, honorary vice president.

Bill Raub, 12W1662, was guest speaker at meeting of the Santa Clara County CRL of San Jose. The meeting began with a very successful pot luck dinner planned by Marlene Furtado, KFC1099.

Any Twelfth District clubs that would like to be introduced in this column should send their news items to CCM Dick Southern.

THIRTEENTH DISTRICT — KFF/KFG

CB Horizons would like all call districts to receive equal publicity; however, news from the Thirteenth District has been pretty scarce. We were delighted to receive a letter from Gary Anderson, KFG0528, concerning recent activities of the Klamath Five-Watter's CB Radio Club. The club revised its constitution, by-laws; added a communications department called "Emergency Communications Service"; applied for membership in REACT; and elected new officers! They have completed a listing of local CB'ers; prepared a listing of local services to be used by travelers; and they plan to request a club call sign for operation of CB nets. Gary reports that the Klamath Falls, Oregon area has experienced an awakened interest in CB — well, I should say so with all these live wires running around accomplishing things! New officers are: president Dave Moran, KFM1046; vice president Larry Baraboo, KFG0246; secretary-treasurer Phil Isensee, 13W0648; communications officer Gary Anderson, KFG0528, WA9AYO/7; sgt.-at-arms Loran Dunn, 13W1369. Gary says if you're going through Klamath Falls, give him a call on 11.

FOURTEENTH DISTRICT — KFI

Jim Whaley and Lloyd Snyder hosted two recent meetings of the Apple Capitol Five Watt Association.

An oyster fry was enjoyed by the Evergreen CB Association of Everett, Washington.

FIFTEENTH DISTRICT — KGB/KGC

The Albuquerque Citizen's Radio Association has its meetings on the first Tuesday of each month. All travelers coming through Albuquerque are cordially invited. Just contact a CB'er on Channel 11, they will be more than happy to assist you.

Bob Mark, KGB1940, assumed editorship of the "Five Minute Times" published by writing Box 354, Albuquerque, N.M. Please send one in return.

Since the June issue of CBH, new officers were elected for this club. President John Goff, KGB1029; vice president R. W. Russell, KGC0102;

turn, and check again.

This rapidly becomes a sort of round-robin technique in which you trim antenna, check FSM, check transmitter, readjust if necessary, check FSM, then trim antenna and repeat.

The place to stop, naturally, is just before the FSM reading starts to drop. Obviously, though, the only way to tell where this point is to go past it! You can overcome this problem by tuning the antenna up a couple of channels lower than the channel you intend to use the most. Then, when you measure a just perceptible drop in field strength, you'll be tuned just about right for the channel you really want to use.

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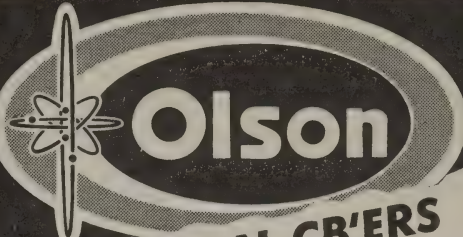
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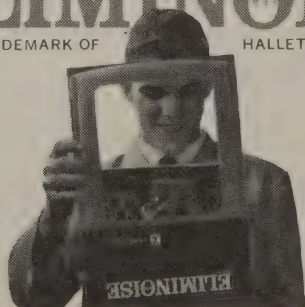


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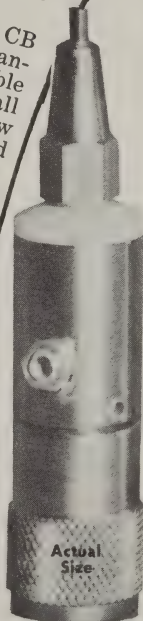
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Thanks to Carl Nissen, KGB0240, for the above items!

EIGHTEENTH DISTRICT — KHA/KHD

Members of the **Packerland Radio Club** in Green Bay, Wisconsin recently donated their services at a local telethon for cerebral palsy. A master control system was set up at the broadcasting center and several base rigs were set up throughout the building. Walkie-talkies were used for communications in the building and surrounding area. One mobile base station was maintained at club member Don Noock's home from which three roving mobiles operated. The mobiles were responsible for transporting guests between auditorium and motels, while the operators at the telethon were concerned with schedule checks, crowd control and safety. This was the second telethon worked this year by the Packerland Radio Club.

NINETEENTH DISTRICT — KGH/KHJ

The hottest day of the year didn't stop the crowd of over 2000 CB'ers who attended the jamboree at Lansing, Michigan. The Five Watters CB Club set up their emergency trailer at the jamboree site and monitored 9 for providing directions to the many out-of-state visitors. The largest caravan of 19 cars came from East Detroit — the "Black Shirts." Fourteen booths were manned by factory representatives, distributors, and dealers; besides a club swap table, there were displays by the State Police and the Red Cross.

TWENTIETH DISTRICT — KIC/KID

This is the Sesquicentennial Year for the township of Gates in upstate New York. CB played an important part in many of the events commemorating the 150th anniversary — sixteen CB units and a base station at the Gates Town Hall handled traffic, crowd and parade control, according to Police Chief William Stauber. As part of the pre-celebration, the "Keystone Kops" handed out a lot of "Citations" and Lyle Adams reports all the CB'ers in that area were glad these weren't the FCC kind.

Numerous grass fires have kept the Western New York Emergency Net busy this summer. Members of this group (Bob Hughes, Chuck Di Rosa and Roger Podisadlo) recently aided a Connecticut trucker who was stranded in their area. The unfortunate trucker was surprised the CB'ers would drive 20 miles out of their way to give assistance.

The CB Rangers Emergency Net supplied some 22 members with walkie-talkies and mobile units to search for a missing man while Danna Vernon, 20Q1468, stood by at base.

Krystal Kracker Club of Oneida handled communications for the first aid trailer at the second annual Soap Box Derby. They also assisted in a local sports car race by checking the drivers via the point system. Boaters on the treacherous Lake Oneida have found the club to be of great help with the marine units.

This CCM says courtesy on the air makes for better CB'ing.

CANADA

This first report on CB'ers or **General Radio Service Operators** in Canada is more of an introduction rather than a detailed report. It is a pleasure to bring news of Canadians in the field of CB to this magazine. GRS in Canada is just over one year old and the interest north of the border is progressing at a rapid rate. Rules and regulations governing the band are almost the same as in the USA; consequently, we are following the lead of our neighbors to the south.

Canadians, this column will be for you. The only way we have of knowing the news of your club or other CB activity is for you to drop us a line. Don't feel you have to be an expert letter writer — all we require is the facts. Please help us make this an interesting and informative column for Canadians!

Send news items to Harold Merton, XM44042, 234 Southcrest Drive, London, Ontario.

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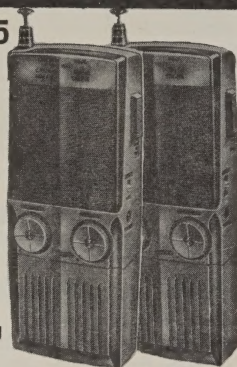
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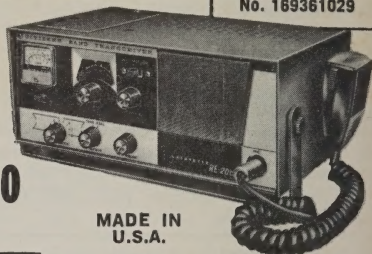
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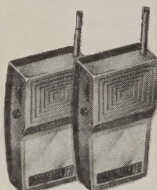


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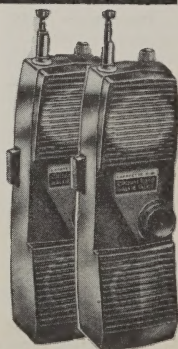
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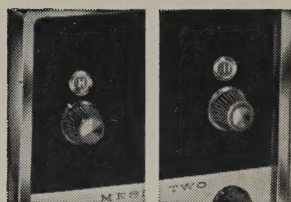
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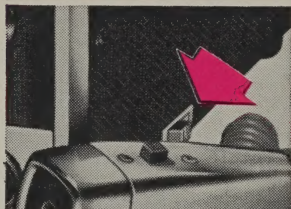


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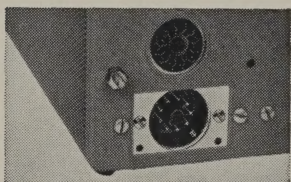
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